AD-A241 759

NAVAL POSTGRADUATE SCHOOL

Monterey, California





THESIS

INTEGRATED FINANCIAL REPORTING FOR A SMALL BUSINESS

bу

Bradford Laurence Martin

March 1991

Thesis Advisor:

Tarek K. Abdel-Hamid

Approved for public release; distribution is unlimited



91 10 23 00 8

SECTIBILITY CT	ASSIFICATION	OF THIS PACE

			RI	EPORT DOCUM	ENTATI	ON	PAGE			
la	REPORT SE Unclassifi	CURITY CLASSIF	CATION		1b. RESTI	UCTIV	E MARKINGS			
22		CLASSIFICATION	AUTHORITY				ON/AVAILABILITY for public release;			
2b.	DCLASSIFI	CATION/DOWNGR	ADING SCHEDU	ĪΕ	Appi	oved	ior public release,	distribut	ion is unimited.	
4.	PERFORMI	NG ORGANIZATIO	N REPORT NUM	BER(S)	5. MONI	TORIN	G ORGANIZATION F	EPORT NU	JMBER(S)	
6a.		PERPORMING ORG		6b. OFFICE SYMBOL			ONITORING ORGAN	ZATION		
		stgraduate Scho		(If Applicable) 37			graduate School			
6c.	ADDRESS	(city, state, and ZIP	code)		7b. ADDF	ESS (d	ity, state, and ZIP coo	le)		
		, CA 93943-500			Mont	terey,	CA 93943-5000			
8a.	NAME OF F ORGANIZA	UNDING/SPONSO TION	RING	8b. OFFICE SYMBOL (If Applicable)	9. PROC	UREMI	ENT INSTRUMENT I	DENTIFICA	TION NUMBER	
8c.	ADDRESS	(city, state, and ZIP	code)	<u> </u>	10. SOUR	CE OF	FUNDING NUMBER:	5		
					PROGRAM ELEMENT!		PROJECT NO.	TASK NO.	WORK UNIT ACCESSION N	NO.
11.		ude Security Classi Financial Repo		all Business (UNCLA	S)				· · · · · · · · · · · · · · · · · · ·	
12.	PERSONAL Martin, Bi	AUTHOR(S)		*			-	•		
13a.	TYPE OF R		13b. TIN	NE COVERED	14. DATE	OF RE	PORT (year, month,d	ay) 15.	PAGE COUNT	
	Master's 7		FROM	70		, Marc			105	
16.		NTARY NOTATION s expressed in th	-	nose of the author and o	lo not refle	ct the	official policy or	nosition (of the Department of	f
		or the U.S. Gove						<u> </u>		
17.		COSATI CODES	arm and an	18. SUBJECT TERMS	-		•	• • •	·	
	FIELD	GROUP	SUBGROUP	Financial reporti	ng, Decisio	n sup	port systems, Spr	eadsheets	3	
										i
19.	ABSTRAC	T (Continue on re-	verse if necessar)	and identify by block numb	er)					
	The s	small business m	anager is face	d with increasing comp	etition on a	a worl	d wide scale in to	day's ma	rketplace, Business	
	decisions	which affect pla	anning and op	erations are more critic	al today th	an in	the past. The ma	nager is	typically faced with	
	making se	ense out of large	quantities of	accounting information	. Decision	suppo	ort tools are neede	ed to simp	plify this endeavor.	
	Elect	ronic spreadshee	ets have been i	used extensively in acco	unting dep	artme	nts for years. Rec	ently, ele	ctronic spreadsheets	
	have dran	natically increas	ed capability	while decreasing in pri	ce. The ob	jectiv	e of this thesis is	to demon	strate the feasibility	
	of using o	off-the-shelf spre	adsheet softw	are to develop an integr	rated financ	ial rep	porting system for	a smal! t	ousiness.	
L										
20.		TON/AVAILABILT TED/UNLIMITED	Y OF ABSTRAC SAME AS		•	RACT S	SECURITY CLASSIF	CATION		
<u>^</u>		RESPONSIBLE INI		KFI. DIR USERS			E (Include Area Code)	22c. O	FFICE SYMBOL	
		Tarek K. Abdel		83 APR edition may	(408	3) 646	-2686	A	S/Ha IFICATION OF THIS PAG	

All other editions are obsolete

Unclassified

Approved for public release; distribution is unlimited.

Integrated Financial Reporting for a Small Business

by

Bradford Laurence Martin Captain, United States Marine Corps B.S., United States Naval Academy, 1984

Submitted in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE IN INFORMATION SYSTEMS

from the

NAVAL POSTGRADUATE SCHOOL March 1991

Author:	Brafford Laurence Martin Bradford Laurence Martin
	Bradford Laurence Martin
Approved by:	T. Hamid
	Tarek K. Abdel-Hamid, Thesis Advisor
	Mul P. Di
	Shu S. Liao, Second Reader
	1. 2
	David R. Whipple, Chairman, Department of Admin Sciences

ABSTRACT

The small business manager is faced with increasing competition on a world wide scale in today's marketplace. Business decisions which affect planning and operations are more critical today than in the past. The manager is typically faced with making sense out of large quantities of accounting information. Decision support tools are needed to simplify this endeavor.

Electronic spreadsheets have been used extensively in accounting departments for years. Recently, electronic spreadsheets have dramatically increased in capability while decreasing in price. The objective of this thesis is to demonstrate the feasibility of using off-the-shelf spreadsheet software to develop an integrated financial reporting system for a small business.

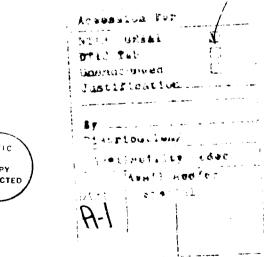




TABLE OF CONTENTS

I.	INT	RODUCTION	1
	Α.	BACKGROUND	1
	В.	PURPOSE	2
	С.	RESFARCH QUESTIONS	3
	D.	CHAPTER OUTLINE	3
II.	FI	NANCIAL REPORTING	5
	A.	BACKGROUND	5
	В.	THE COMMON FINANCIAL STATEMENTS	8
		1. BALANCE SHEET	9
		2. INCOME STATEMENT	13
		3. STATEMENT OF RETAINED EARNINGS	15
		4. STATEMENT OF CASH FLOWS	16
	С.	RELATIONSHIPS BETWEEN FINANCIAL STATEMENTS	18
III	. s:	YSTEM ARCHITECTURE	22
	A.	METHODOLOGY	22
	В.	STRUCTURE	22
		1. Spreadsheet A	23
		2. Spreadsheet B	30
		3. Spreadsheet C	32
		4. Spreadsheet D	32

	c.	MENU	HIE	ERAR	CH?	Y	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	32
IV.	SY	STEM 1	DEMO	NST	RA:	ric)N	•	•			•								•		•	38
	A.	DATA	INF	TUT	•	•		•	•	•		•		•	•	•							38
	в.	REPO	RTS		•	•		•	•	•		•		•	•	•		•					44
	C.	PLOT	s.				•	•		•	•	•				•		•					46
	D.	QUIT	•		•	•	•	•	•			•		•	•	•							48
v.	CON	CLUSI	NC						•			•				•				•			52
	A.	RESE	ARCE	I RE	SUI	LTS	3	•	•	•		•	•			•			•				52
	В.	AREA	S FC	R F	UTU	JRE	E F	RE S	SE <i>I</i>	ARC	СН	•			•				•				54
APPI	ENDI	X A			•																	•	57
APPI	ENDI	ХВ			•			•					•						•			•	85
LIST	r of	REFE	RENC	CES		•	•											•					96
вів	LIOG	RAPHY	•		•	•											•		•	•	•		97
INI	TIAL	DIST	RIBU	JTIC	N I	LIS	ST.											. ,			•		98

I. INTRODUCTION

A. BACKGROUND

Entrepreneurship is alive and well in America. As our economy becomes more tightly integrated with the world's economy, however, even the small business manager is finding that competition for scarce resources is growing keener. Sound financial decision making, consequently, is more critical today than 20 years ago. Small business managers need quick access to structured information that will aid them in their decision making process.

The computer age has brought a wealth of new technologies to the marketplace that show promise as decision making tools. Microcomputers today are as fast and have as much storage as mainframe computers of the 1970's, providing execution speed and storage capacity essential to a decision support system that must analyze large amounts of data and respond to a rapidly business environment.

Software has also grown quickly in capability. Highly sophisticated electronic spreadsheets such as Lotus Development Corporation's 1-2-3 can function as databases, presentation graphics generators, and analytical tools. Macro languages provide the developer with the ability to

access these tremendous capabilities and combine them into complete application packages.

Accessing all this powerful technology requires overcoming a learning curve that is often very steep. Although the cost of these technologies is steadily dropping, it remains significant for the small business. Hiring an application programmer is not practical for the small business manager who may be working out of his garage. The electronic spreadsheets, therefore, need to be simple enough so that the average businessman can produce applications that store, analyze, and display data.

B. PURPOSE

This thesis develops the first module of an integrated decision support system that will help the small business manager to be more productive. The system is called the Small Business Decision Support System (SBDSS).

Specifically, this module integrates and automates the reporting of financial statements and business performance measures. The system provides:

- Highly <u>integrated</u> financial statements that only require one-time data entry to increase data consistency.
- Ready access to the previous 12 months of financial data and statistics.
- The ability to reproduce financial data in a report format.

- The ability to do trend analysis of financial data and to display the results of this analysis in a graphical form.
- · An easy to use and intuitive menuing system.
- A high degree of self-documentation and other features to enhance maintainability and connectivity with future modules.

C. RESEARCH QUESTIONS

The thesis has one primary research question: Is it possible to integrate and automate the time intensive task of developing financial statements and associated plots of performance indicators? In addition, the following two questions helped guide the research:

- Is Lotus 1-2-3 Release 3.0 an effective development environment for a small business manager, who is a computer novice, to develop useful decision support tools?
- Can a system be designed to reduce redundant data entry and thus improve data consistency across highly integrated financial statements?

D. CHAPTER OUTLINE

This thesis has five chapters. Chapter I, Introduction, provides a background to the factors that spawned the need for this research. The purpose of the thesis and the associated research questions are described in detail.

Chapter II, Financial Reporting, explores the function, design, and interrelationships of financial reports.

Chapter III, System Architecture, provides an overview of the structure of the system. Particular emphasis is given to the menu hierarchy. Chapter IV, System Demonstration, is a user's manual to SBDSS. Chapter V, Conclusion, covers lessons learned from this research and recommendations for areas of future research.

II. FINANCIAL REPORTING

A. BACKGROUND

Webster's dictionary defines accounting as "the system of recording and summarizing business and financial transactions and analyzing, verifying, and reporting the results." [Ref. 1:p. 50] Accounting, therefore, bridges the gap between business operations and decision makers inside and outside a business entity. Accurate, highly summarized accounting information is critical to the decision making process. Making decisions is essentially a risky endeavor since the aim is often to affect future events. Highly summarized and accurate accounting information reduces the risk associated with decision making. Managers, bankers, and others thus have an insatiable appetite for such information.

The reporting function is of critical importance to any accounting system. The key is to understand what information is relevant to which decision makers and in what form is it best to communicate this information. A useful analogy is to view the reports generated by an accounting system as the gauges in the cockpit of a commercial airliner. Each gauge presents data in one form or another about the operation of the aircraft. This data is relevant

to one or more of the aircrew at various times and thus becomes information. A particular gauge may not be singularly important. Taken in sum with other gauges or compared to past information, however, the information displayed takes on greater importance. From the cockpit of their aircraft, the aircrew can determine the aircraft's operating efficiency and make the decisions necessary to ensure the effectiveness of the flight.

Many people receive accounting information from business. Each user of accounting information requires that it be presented in a particular form and have a particular content. Figure 1 details the major forms of accounting information produced by the accounting system of a business and the corresponding groups of users for that information.

The focus here is on the common financial statements provided to users both inside and outside a business. Financial statements aid decision makers in finding the financial strength, profitability, and outlook of a business. These statements are the primary source of information to users outside the business [Ref. 2:p. 6]. Bankers, brokers, and government regulatory agencies are keenly interested in the financial health of business organizations. A tremendous volume of accounting data is generated by modern corporations. Therefore, the information contained in financial reports must be of a highly summarized nature ye. focused enough to be relevant.

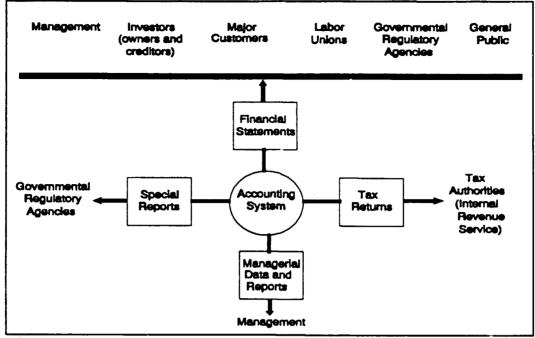


Figure 1. Accounting Information Users [Ref. 2:p. 7]

Financial statements, if they are to be useful, must be capable of being easily compared to past statements.

Fortunately, the accounting profession over the years has developed generally accepted accounting principles (GAAP).

They are "the accounting concepts, measurement techniques, and standards of presentation used in financial statements."

[Ref. 2:p. 30] These principles make financial statements easily comparable from one year to the next. Decision makers thus can view the financial performance of a business organization in a historical perspective and derive the information necessary to chart the organization's future course. Investors and bankers can better decide that companies show promise to make the allocation of scarce capital more efficient. Adherence to these principles also

increases the reliability of reported information [Ref. 2:p. 11].

The accounting profession must work diligently to keep abreast of changes in the laws that regulate economic activity and in the diversity of the economic activity itself. Maintenance of the generally accepted accounting principles is the chief responsibility of the Financial Accounting Standards Board (FASB). The FASB has seven members. Thei backgrounds range from public and private accounting to accounting education. The FASB is a private entity. Traditionally, accounting standards have been developed and refined in the private sector. The federal government also exercises much influence in this area. The Securities and Exchange Commission (SEC) regulates the content and reporting standards of financial statements for any corporation that offers securities to the public. [Ref. 2:pp. 11-12]

B. THE COMMON FINANCIAL STATEMENTS

The four most common financial statements reported externally are the balance sheet, income statement, statement of retained earnings, and statement of cash flows. Although derived from the same accounting records, each statement takes a somewhat different view of the well being of a business. Taken in sum with past statements, they are tremendous sources of information relating to business

operations. Financial statements are typically a page in length. Each has a heading consisting of the name of the business organization, the name of the statement, and the end date of the period covered by the statement or the date that the report was prepared. Normally, these statements are prepared annually. Many businesses, however, compile them on an interim basis such as monthly or quarterly to make better use of their information. The following paragraphs describe each of these statements, its particular uses, and its interrelationships with the other statements.

1. BALANCE SHEET

The balance sheet is also known as the statement of financial position [Ref. 3:p. 35]. It is a snapshot of a business's financial position on a particular date. The balance sheet has two parts: the heading and the body. As illustrated in Figure 2, the body has three sections: assets, liabilities, and stockholders' equity. The ordering of the elements in each section follows an established pattern. The first asset listed is always cash. Following cash are assets such as accounts receivable and supplies. They will be converted into cash or consumed in business operations in the near future. The last assets listed are more permanent such as land and equipment. Finally, the liabilities are always found above the stockholders' equity. [Ref. 2:pp. 15-16]

VAGABOND TRA	VBL AGENCY, INC.
Balan	ce Sheet
Decembe	r 31, 19
Assets	Liabilities & Stockholders' Bquit;
Cash	Liabilities: Notes payable\$ 26,000 Accounts payable
Building	Total liabilities \$ 80,000 Stockholders' equity: Capital stock\$225,000 Retained earnings. 45,000 270,000
Total\$350,000	Total350,000

Figure 2: The Balance Sheet [Ref. 2:p.15]

Assets are defined as "economic resources owned by a business that are expected to benefit future operations."

[Ref 2:p. 29] Assets may either be tangible or intangible. Tangible or physical assets include such things as buildings, cash, and office equipment. Intangible assets are often in the form of legal claims or rights. Patent rights are an example of this. Assets, despite of their form, are recorded at their original (historical) cost. This is called the cost principle. The principle, however, creates a problem when someone wants to know how much a business is currently worth. [Ref. 2:p. 16]

Accountants make several assumptions when following the cost principle. First, accountants assume that assets are purchased for use and not for resale. This is called the

going-concern assumption. A business is assumed to be a continuing enterprise. Thus the sale of assets such as land and equipment could seriously impact business operations. The actual value of the assets is not as important as the intention to sell them. Second, accountants assume that the dollar is a stable unit of measurement such as the meter. This works well in times of stable prices. Excessive inflation, however, can render the asset costs meaningless. The cost basis for valuing assets ignores the tremendous fluctuation between the purchasing power of the dollar through time. [Ref. 2:pp. 17-18]

The FASB has attempted to eliminate this weakness of cost basis valuing for assets. The results were not encouraging. The cost of determining current market values and price-level adjustments was greater than the benefits provided. Accountants can point to the objectivity principle as justification for using the cost principle. This principle says that an asset's valuation should be factual and verifiable. Whereas market values are constantly changing, the price paid for an asset is recorded in the business's accounting records. This is an accurate reflection of the owner's valuation of the asset at the time that it was purchased. [Ref. 2:pp. 17-18]

Liabilities are the next section in the body of the balance sheet. Liabilities are also commonly known as debts. Two liabilities are worth noting. Accounts payable

is the liability created by the purchase of goods or services on credit. Notes payable arise from the borrowing of money to meet the business's goals. The business asks a lender to provide a specific sum of money. The lender in return requires that the money must be repaid by a specific time and that the repayment includes interest. The business then issues a formal written promise to repay the money under the restrictions required by the lender. [Ref. 2:pp. 18-19]

The ast section of the body of the balance sheet is owners' equity. If the business issues public stock, this section is called stockholders' equity. Owners' equity represents the funds invested by the owners. This is a residual amount since the claims of creditors must legally be fully satisfied first. The accounting equation states that assets equal liabilities plus owners' equity. To clarify the meaning of owners' equity, it is often rewritten as owners' equity equals total assets minus to al liabilities. This emphasizes the point that owners' equity is a residual claim on the business' assets. Owners' equity can be increase either by funds invested by the owners or by profits from the business' operations. Conversely, owners' equity can only be decreased by distribution of assets to the owners or by losses incurred in the operation of the business. [Ref. 2:pp. 19-21]

Owners' equity normally has two components: capital stock, retained earnings. Capital stock represents the funds invested in the business by the owners. Capital stock is composed of shares. People who hold these shares are called stockholders. Retained earnings represent those funds not distributed to the owners and retained in the business. The distribution of funds to the owners is in the form of dividends. [Ref. 2:pp. 20-21]

2. INCOME STATEMENT

The income statement shows "the operating results of a business by matching the revenue earned during a given period with the expenses incurred in obtaining that revenue." [Ref. 2:pp. 101] The income statement views the organization over a period rather than on a specific date. This is necessary to understand a business's economic performance as represented by the term net income. The loss or gain in resources over a period is much more meaningful to decision makers than the loss or gain for a single day.

The income statement is divided into revenue and expenses (Figure 3). "Revenue is the price of goods sold and services rendered during a given accounting period."

[Ref. 2:p. 86] When a business provides services or delivers goods to a customer it receives payment immediately or it bills the customer for future payment. The future payment is called an account receivable. Revenue can be

separated on an income statement into many categories such as sales, interest earned, and fees earned. Revenues are recorded at the time the services are provided or goods sold to the customer rather than when the cash payment is received. This is known as the realization principle that is another generally accepted accounting principle. [Ref. 2:p. 86]

Expenses, on the other hand, "are the cost of the goods and services used up in the process of earning revenue."

[Ref. 2:p. 87] They are, then, the costs associated with developing, producing, marketing, and selling a product.

Expenses can be placed into many categories from employee salaries to depreciation of buildings. To determine net income accurately, all expenses must be offset by the revenues they produced. This is called the matching principle. There should be a cause and effect relationship between all expenses and revenues reported for a given period. Recording expenses is not based on when the cash payment was made. Rather, it is based on the period in which the expenditure produced or help d produce the revenue. [Ref. 2:p. 87]

		OLYMPIC SPO	KTING GOO	DS		
		Income S	tatement			
	For the	e Tear Endin	g Decembe	er 31, 19_		
Revenue: Sales. Less:		s and allowa	BCER		1 12.000	\$617.00
Net sa	les	• • • • • • • • • • • • •				\$600,00
Invent Purcha	goods sold: ory, Jan. 1 ses Purchase rett allowances Purchase disc			\$367,000	\$ 60,000	
Net pu Add:	rchases Transportation			X357.00D		
	red cost of pi				370,000	
Cost o Less:	f goods avails Inventory, Be	able for sale			\$430,000 70,000	
Cos	t of goods sol	id				360,000
Gross pr	ofit on sales.					\$240,00
Sellin Sal Adv Del	g expenses: g expenses: es salaries ertising ivery service. reciation			74.000 29.000 10.900 6.000		
Genera Off Uti	otal selling e l & administra ice salaries lities reciation	tive expens	es: \$	57,000 2,100 2,000	\$119,900	
•	otal general &	administrat	ive expe	nse 3	61,100	
Total op	erating expens	es			••••••	181,000
	rom operations axes expense					\$ 59,000 9,000
Net incom	Be	********				\$ 50,000

Figure 3. The Income Statement [Ref. 2:p. 190]

3. STATEMENT OF RETAINED EARNINGS

The retained earnings statement shows the change in retained earnings during an accounting period (Figure 4).

As stated earlier in the discussion of the balance sheet,

retained earnings are that part of owners' equity that is generated by the profitable operation of the business. They are retained by the business rather than being distributed to the owners as dividends.

GREENBILL REAL ESTATE	
Statement of Retained Barnings	
For the Month Bnded October 31, 19	
Retained *armings, Sept. 30, 19	\$ -0- 2,571
SubtotalLess: Dividends	\$2,571
Retained earnings, Oct 31, 19	\$ 771

Figure 4. The Statement of Retained Earnings [Ref. 2:p. 101]

4. STATEMENT OF CASH FLOWS

The fourth common financial statement is the statement of cash flows (Figure 5). This statement builds upon the information contained in the previous statements. Though the balance sheet helps figure out solvency and the income statement helps determine profitability, users of this information also need to assess a business's ability to remain solvent. The basic purpose of the statement of cash flows is to provide information on the origin and amount of cash receipts and on the destination and amounts of cash payments. Cash is defined by the FASB to include cash and

cash equivalents. Cash equivalents are highly liquid, short term investments such as money market funds and Treasury bills. [Ref. 2:pp. 543-547]

	ALLISON CORPORA	ATION	
	Statement of Cas	Plows	
	For the Year Ended Dec	ember 31, 19	
Cash flows from	operating activities: from operating activities	ties	\$ 50,000
Purchases of Proceeds from Loans made Collections Cash paid to	investing activities: marketable securities. sales of marketable so n loans	(17,000) 12,000 (160,000)	
Net cash used	y investing activities		(115,000
Proceeds from Payments to Proceeds from Proc	financing activities: short-term borrowing. settle short-term debts issuing bonds payable issuing capital stock d		
Net cash provi	led by financing activi	ties	100,000
Net increase (Cash and cash	ecrease) in cash	of year	\$ 35,000 40,000
Cash and cash	quivalents, end of yea	.	\$ 75,000

Figure 5. The Cash Flow Statement [Ref. 2:p. 545]

The body of the statement of cash flows is divided into four parts. The first section, cash flows from operating activities, is of critical importance. A business that cannot raise funds from operations will be hard pressed to gain sufficient funds from investing and financing activities to remain solvent. In addition, investors and

lenders will not commit their funds to a business that cannot develop sufficient funds from its operating activities to make interest payments, pay dividends, etcetera. The second and third sections detail the net cash flow from investing activities and from financing activities. The fourth section displays the net change in cash during the period.

C. RELATIONSHIPS BETWEEN FINANCIAL STATEMENTS

Financial statements by virtue of the common source of their data, are highly interrelated. Each provides a unique view of the business enterprise. This view conveys a large amount of information to user. Taken in sum with the other reports, however, the different views become a more coherent picture of the business enterprise's financial well being as a whole. For example, the casual user may be tempted to view a decrease in retained earnings between two successive balance sheets as a poor trend. To identify the natur the decrease, the user should look at the statement of retained earnings and the income statement. The statement of retained earnings shows how much of the net income went to the owners as dividends. The remaining amount when added to the retained earnings from the previous accounting period becomes the retained earnings for the current period. income statement then goes into greater detail explaining the reasons behind the size of the net income.

Similarly, the change in cash from one balance sheet to the next cannot be explained without looking at the statement of cash flows. The statement of cash flows goes into great detail explaining the inflows and outflows for the organization's cash and cash equivalents.

Nearly every entry in the statement of cash flow is dependent on information from the balance sheet or the income statement. The net cash flow from operations is equal to cash received from customers plus investment income minus the cash payments for merchandise and expenses. These quantities are accrual based measurements and must be converted to a cash basis before they can be used. The following examples describe this conversion process and illustrate the interdependence of these financial statements.

The entry Cash Received From Customers may simply be equal to the sales made for cash. Sales, however, are often made on credit. This is called accounts receivable and it is on the balance sheet. If accounts receivable increased during an accounting period, then the sales made on credit exceeded the cash collected on outstanding credit sales. Thus, the true cash received from customers would be equal to net sales minus the increase in accounts receivable. Similarly, if accounts receivable decreased during an accounting period, then credit sales were less than the cash collected on the outstanding credit sales. Thus, the true

cash received from customers would be equal to net sales plus the decrease in accounts receivable. The following formula summarizes this discussion [Ref. 2:p. 551]:

• Cash received from customers =
 Net sales + decrease in accounts receivable}
 or - increase in accounts receivable}

The entry Cash Payments For Expense is usually very different from the amount of expenses shown on the income statement. The amount of expenses on the income statement is equal to goods and services used during the accounting period. There are several reasons for the difference. First, several expenses do not require a cash payment. Therefore, such non-cash expenses as depreciation, though accounted for on an accrual basis, must be deducted from the total expenses. [Ref. 2:p. 553]

Second, difficulty arises because expenses are recorded when their associated goods or services are used that may not be when the cash payment for the expense was made. Payments made in advance, such as insurance, become an asset known as a prepaid expense. An increase in prepaid expenses must be added to total expenses whereas a decrease must be subtracted. If cash payments are not made until a following period, they become a liability called accrued expense payable. If accrued expense payable increases, then expenses purchased on credit have exceeded cash payments made on the liability. Therefore, the increase should be

subtracted from total expenses. The converse is also true. The following formula summarizes the this discussion [Ref. 2:p. 553]:

The income statement, statement of retained earnings, and statement of cash flows, in essence, form a bridge between consecutive balance sheets. They allow the user to go beyond simple horizontal (trend) analysis. Using vertical analysis on these other statements brings meaning to the changes seen in the balance sheets. A useful analogy is a sailor who watches the surface of the ocean for signs of change. Though the swells increase with the passing days, he cannot be sure if a storm is coming his way or whether it will pass harmlessly by hundreds of miles away. If he has knowledge of the changes in barometric pressure, temperature, wind direction, ocean temperature, etcetera, which is the third dimension, he would know why the swell had changed and if he needed to chart a new course.

III. SYSTEM ARCHITECTURE

A. METHODOLOGY

This system was developed through prototyping. This methodology was chosen for the following reasons:

- The intended user was uncertain about system requirements.
- It provides a working model quickly that aids the user in discovering his real requirements.
- It encourages active end-user participation.
- It allows for rapid development of a working system.
 This is necessary due to the lack of development time.
- Its iterative nature provides an opportunity to more quickly overcome the learning curve for the development platform.
- It allows for the early detection of errors.

B. STRUCTURE

The Small Business Decision Support System (SBDSS) is designed as a stack of four spreadsheets within one file. This reduces the overhead associated with linking several files together. Functionality is divided between the spreadsheets to simplify maintenance. Spreadsheet A contains the financial data. Spreadsheet B contains the User Data Entry Form. Spreadsheet C contains all the macros which power the system's menus. Finally, Spreadsheet D

contains the program documentation consisting of range names, their locations, and brief definitions.

1. Spreadsheet A

Spreadsheet A is the financial data storage area for the system. Though Lotus 1-2-3 can function as a sophisticated database, this database is designed as a series of reports. Each series of reports is assigned a range name. The reports on the left are called JANUARY and the far right reports are called DECEMBER. Within each range there are six reports corresponding to the financial reports required by the user each month: Income Statement, Statement of Retained Earnings, Balance Sheet, Statement of Cost of Goods Sold, Statement of Cash Flows, and Performance Indicators. Figures 6 through 11 provide examples of each financial report.

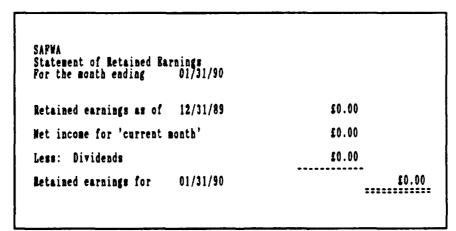


Figure 6. Statement of Retained Earnings

SAPWA Income Statement For the Month Ending 01/31/90			
Revenue: Sales Less: Sales tax		\$0.00 \$0.00	
Net sales Interest Barned		00.02 00.02	
Total revenue	•••		£0.00
Cost of Goods Sold: Inventory, beginning of month Purchases Add: Customs Freight	0.00 0.00 0.00	£0.00	
Delivered cost of purchases		£0.00	
Cost of goods available for sale Less: Inventory, end of month	•••	00.03 00.03	
Cost of goods sold			0.00
Gross profit on sales			\$0.00
Operating expenses: Selling expenses Marketing expenses: Advertising Exhibitions Seminars	0.00 0.00 0.00	00.03	
Tota' marketing expenses General & admin. expenses: Office salaries Utilities Travel Interest Other	10.00 10.00 10.00 10.00 10.00	£0.00	
Total general & admin. expens	es:	\$0.00	
Total operating expenses			10.00
Income from operations Income tax expense			00.00 00.00
Net income			£0.00

Figure 7. Income Statement

SAFWA Balance Sheet For the month ending 01/31/90			
Assets:			
Current assets: Cash Bank Accounts receivable Prepaid expenses Merchandise inventory Consumable supplies	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00		
Total current assets Plant and equipment: Office equipment Furniture Building	£0.00 £0.00 £0.00	£0.00	
Total plant and equipment		00.02	
Total assets		:::::	£0.00
Liabilities and Stockholders' Equity	:		
Current Liabilities: Accounts payable Income taxes payable Notes payable	00.03 00.03 00.03		
Total current liabilities Long term debt (Notes payable) Stockholders' equity: Capital stock Retained earnings	0.03 00.03	£0.00 £0.00	
Total stockholders' equity		20.00	
Total liabilities and stockholders'	equit y		£0.00

Figure 8. The Balance Sheet

Statement of Cost of Goods Sold For the month ending 01/31/90		
Inventory, beginning of month	ŧ	0.00
Purchases	£0.00	
Add: Customs Freight	£0.00 £0.00	
Delivered cost of purchases		0.00
Cost of goods available for sale	\$	0.00
Less: Inventory, end of month		0.00
Cost of goods sold	!	0.00

Figure 9. The Statement of Costs of Goods Sold

Performance Indicators For the month ending 01/31/90)
Wargin %	0.0
Return on mapital	0.0
Asset turnover	0.0
% of gross margin on sales	0.0
Operating expense ratio	0.0
Return on common stockholders' equity	0.00
Working capital	10.0
Inventory turnover	0.0
Current ratio	0.0

Figure 10. Performance Indicators

SAPWA Statement of Cash Flows For the month ending 01/31/90			
Cash flows from operating activities: Cash received from customers Interest received	£0.00 £0.00		
Cash provided by operating ac	tys.	00.03	
	00.02 00.03 00.03 00.03		
Cash disbursed for operating	actys.	£0.00	
Net cash flow from operating activitie	8		£0.00
Cash flows from financing activities: Proceeds, short-term borrowing Proceeds, issuing capital stoc Less:	£0.00 £0.00		
Payments, short-term debts Dividends paid	00.02 00.03	£0.00	
Wet cash provided by financing activit	ies		\$0.00
Net increase (decrease) in cash Cash and cash equivalents, beginning o	f month		0.00 £0.00
Cash and cash equivalents, end of mont	h		00.02

Figure 11. Statement of Cash Flows

Spreadsheet A also contains copies of the User Data

Entry Form inputted for each month. These forms are located
below the respective month's range of reports. They are
not, however, associated with these range names. Subsection
2 provides further detail on this form.

This approach has several advantages. First, the financial data is stored in the same report that is used for both viewing and printing. This consistency makes system maintenance less burdensome and helps ensure that the output of the system is always identical with the stored data.

Printing the reports is greatly simplified. The appropriate macro need only print the required range. Advanced formatting is not required since fifty-six rows is the default printing parameter in Lotus 1-2-3. Thus, all forms are printed on a separate sheet without designating page breaks.

Second, storing data in forms also makes it easier to develop macros that manipulate the data. Each data element is in a fixed locat on. This eliminates the need to account for shifting cell addresses such as occurs when records are appended in a standard Lotus 1-2-3 database application.

Also, many data elements are used elsewhere in the reports for a particular month. For example, each form within a month has the same date. Copying the date used in the Income Statement, the first report, into subsequent reports ensures consistency of that data. This also simplifies the macro which copies data into the reports for a particular month. The particular data element need only be copied once into the particular range. After that, embedded formulas ensure data consistency throughout all reports.

In a similar way, when a formula in a report requires a data element that is found in a report from the previous month, it is very simple to retrieve that data since its cell address does not change. For example, in the Statement of Retained Earnings for each month there are two formulas that retrieve data from the previous month. The closing

date and the retained earnings for the previous month are used as the first inputs for finding the retained earnings for the current month.

Third, since there are only twelve months in the database, the user does not have to specify a particular year when he/she wishes to view, print, or plot the data. This reduces the need for user input. Macros can be much simpler when they do not have to deal with error conditions created by inaccurate user input.

Also, the database does not grow with each additional month of data. The data input macro overwrites the data from the same month from the previous year with that from the current year. This keeps the system smaller and less likely to exceed the memory resources of the host computer. The need for maintenance macros is similarly reduced. There is no need to develop macros that purge outdated data.

A potential weakness is the presence of circular references. These are formulas that link the months together so that the solution for a formula becomes the argument for the corresponding formula in the subsequent month. There are two of these references. The retained earnings and cash (and cash equivalents) data elements for the previous month are used in formulas in the current month. If the Global Recalculation setting is set to automatic, all formulas throughout the worksheet will automatically recalculate if any of the arguments change.

Since each month is linked to the one behind and after it, the calculations continue until the value exceeds the length of a cell. This is cured by setting Global Recalculation to manual when the system is started and only allowing macros to recalculate specific ranges.

2. Spreadsheet B

Spreadsheet B contains the User Data Entry Form. An example of this form can be seen in Figure 12. This form is used as a template for entering each month's financial data. This form takes advantage of the difference in color between protected and unprotected cells to distinguish the inputted data, in green, from data element labels, in white. The form also contains embedded formulas for converting between currency amounts in U.S. dollars and British pounds.

Uger Data Entry Form				Uper Data Ent	try Form	; • •••••••••
Date: (format WW/DD/TT)	>	(
Sales:	•	(
Sales tax:	•	(
Interest earned:	>	(
Purchases for inventory:	•	‹				
Customs on purchases:	>	(
Freight on purchases:	>	(
Inventory, end of month:	>	•				

Figure 12. User Data Entry Form

Selling expenses:	>	•
Advertising expenses:	>	•
Exhibition expenses:)	(
Seminar expenses:)	•
Office salaries:	>	(
Utility expenses:	>	•
Travel expenses:	>	•
Interest expenses:	>	•
Income tax expense:	>	(
Other expenses:	>	•
Dividends paid:	>	(
Cash on hand:	>	<
Bank account balances:		
1) in £'s 2) in \$'s	>	(
Rich rate Total	>	<pre> <press #="" <="" for="" pre="" total=""></press></pre>
Balance of accounts receivable:	•	•
Prepaid expenses:	>	. (
Cost of consumable supplies on band:	>	•
Cost of office equipment owned:	>	(
Cost of furniture owned:	>	•
Cost of building (if owned):	•	•
Balance of accounts payable:	>	•
Income taxes payable:	>	(
Notes payable (less than one year):		
1}B.LE £'s 217. \$'s	>	(
3)¥.LÈ E'e	>	(
4)Other E's Yotal	>	(Press F for tota
Long term debt (greater than one year):	>	•
Capital stock:	>	•
Proceeds from short term borrowing:	>	(
Proceeds from issuing capital stock:	>	•

Figure 12 (cont). User Data Entry Form

3. Spreadsheet C

Spreadsheet C contains the macros that provide all the functionality for the system. Appendix A contains a complete listing of all macros found in Spreadsheet C. Placing all macros on the same spreadsheet or in the same location is extremely beneficial. This application is large (over 200 kilobytes of disk space) and spans 4 spreadsheets. The operations executed by the macros cover this entire workspace. The flow of instructions can be difficult to trace. Placing all macros in one location greatly simplifies troubleshooting, maintenance and modification.

4. Spreadsheet D

Spreadsheet D contains a complete listing of all range names used in the system (see Appendix B). The cell addresses and a brief description also accompany each range name. This list is produced by using Lotus' self-documentation facilities. This self-documentation feature is extremely useful for system maintenance. The list can be quickly updated. This gives the maintainer with a current and accurate list to use as a reference tool. The maintainer, therefore, benefits by having a ready reference to allow more rapid troubleshooting and modification.

C. MENU HIERARCHY

SBDSS uses a customized menuing interface. This approach is very popular among users who only use an

application occasionally [Ref. 4:p. 587]. All menu items are self-explanatory and use terminology common to the user. To reduce the clutter of too many menu items, the menus are designed hierarchically. The branching of the hierarchy is based on the logical flow of choices that the user makes to define what he/she wants to do. The user is able to access any of the tools in the system from anywhere in the menu hierarchy with only a few keystrokes.

Using menus has significant advantages. Even the occasional user is able to quickly learn how to manipulate the system. The user only has to use three keys to access all the features available: LEFT ARROW, RIGHT ARROW, ENTER. Since the menus will only respond to a few keys as input, the macros powering the menus do not have to provide for possible error conditions arising from incorrect user input. Finally, Lotus 1-2-3 provides a rich macro language that makes developing menus somewhat simple and fast.

Dialogue charts provide a powerful tool for evaluating the sequencing and variations of screens seen by the user. Figures 13 through 16 are the dialogue charts for this system. The bidirectional arrows show that the user can move to a subordinate menu or function by selecting that menu option. Then, the user can move to a superior menu by using the ESCAPE key. The arrows also show the flow of control through the menu hierarchy. Each rectangle is divided into three parts. The top section contains a number

that is used to show the ancestry of any menu or screen.

The middle section describes the screen, menu, or function.

The bottom section refers to the user to the approximate location of the corresponding macro, menu, or screen in Spreadsheet C as illustrated in Figure 17. [Ref. 4:pp. 589-591]

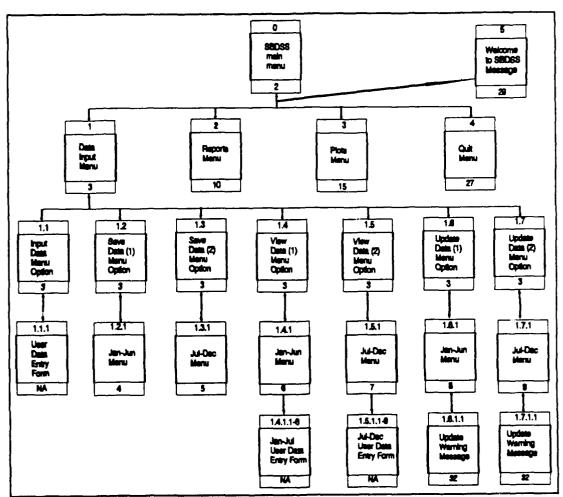


Figure 13. The Main Menu including the Data Input Menu

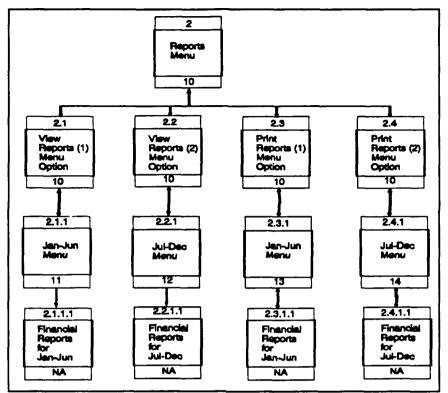


Figure 14. The Reports Menu

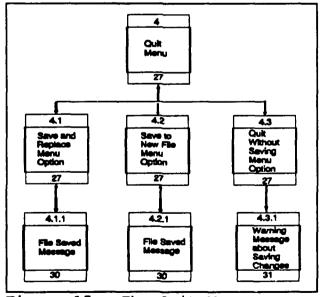


Figure 15. The Quit Menu

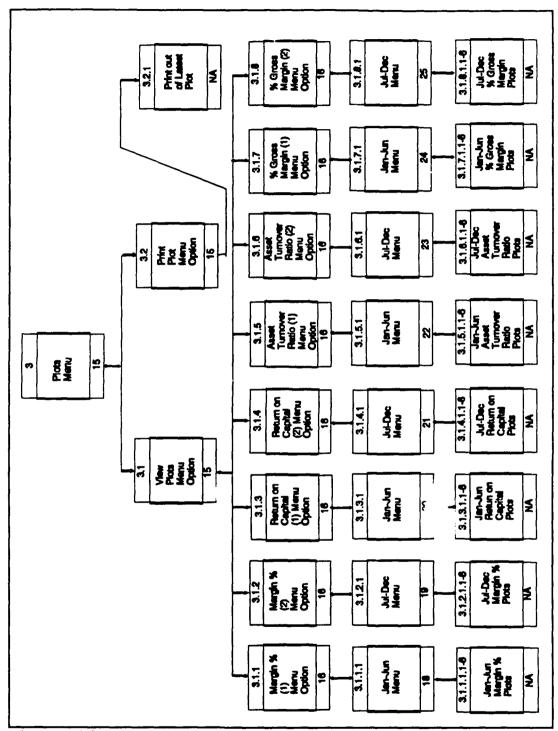


Figure 16. The Plots Menu

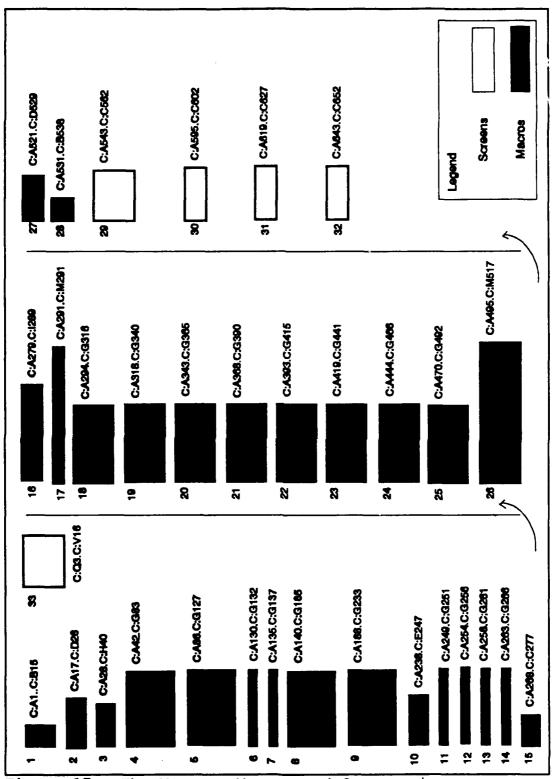


Figure 17. The Macros, Menus, and Screens in Spreadsheet C

IV. SYSTEM DEMONSTRATION

The Small Business Decision Support System (SBDSS) is designed to provide the user with powerful tools that can be accessed via customized menus. Each menu item is carefully chosen to be brief yet easily understood by the user. An explanatory subtitle accompanies each menu choice and reduces the need for help screens. The entire functionality of this system is never more than a few keystrokes away. This hierarchial, well defined menu system is the key which allows the user access to all the tools the system has to offer.

The following paragraphs provide a user's guide to traversing the menu structure. The opening screen and MAIN menu (Figure 18) are automatically generated when the user retrieves the application file. The MAIN menu divides the system into four functional modules: DATA INPUT, REPORTS, PLOTS, QUIT. The steps in each module are illustrated by figures showing examples of the screens seen by the user. When appropriate, only a menu is displayed.

A. DATA INPUT

The user selects DATA INPUT from the MAIN menu when one of four conditions exist. (1) The user needs to input monthly data. (2) The user wishes to save monthly data that

has already been inputted. (3) The user wants to view/modify data that has already been inputted. (4) The user wishes to modify inputted data. After selecting the DATA INPUT menu, the user is presented the menu in Figure 19. The menu items enclosed by brackets are not immediately visible. They can be found using the arrow keys to move left or right and then pressing the RETURN key. There is only one INPUT DATA menu item since this function is not specific to a particular month. It is used to input monthly data into a generic data entry form. SAVE, VIEW, and UPDATE DATA are divided into two parts each because each menu item is specific to a range of six months: (1) January through June, and (2) July through December.

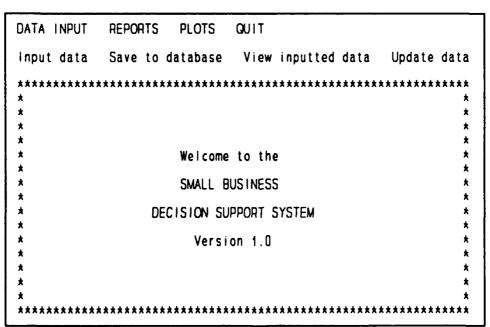


Figure 18. The Main Menu

INPUT DATA SAVE DATA (1) SAVE DATA (2) VIEW DATA (1) VIEW DATA (2) Input the new data into the Data Entry Form

[UPDATE DATA (1) UPDATE DATA (2)]

Figure 19. Data Input Menu

If the user needs to input monthly data, he/she selects INPUT DATA. This executes a macro that displays the User Data Entry Form and then returns system control to user. Figure 20 contains the top portion of this form. Data is inputted by scrolling to the appropriate cell, typing the value (or label for the month), and pressing return. Two fields, bank account balances and notes payable, have notes to their right which instructs the user to press the F9 function key to execute an imbedded formula. Properly positioned entries are displayed in green. Entries improperly placed appear in white. At the bottom of the User Data Entry Form, the user is instructed to press the ALT and R keys to return the system to the MAIN menu after data input is complete.

Veer Bata En	try Form	•	

Date: (format WE/DD/TT)	>	•	
Sales:	>	(
Sales tax:	•	(
Interest earned:	>	(
Purchases for inventory:	>	(
Customs on purchases:	>	(
Freight on purchases:	>	(
Inventory, end of month:	>	(
Selling expenses:	>	(
Advertising expenses:	>	•	

Figure 20. The User Data Entry Form

After the user restarts the system, the MAIN menu reappears with a new system logo screen that is used throughout the remainder of the user's session (Figure 21). To begin saving the monthly data, the user should again select the DATA INPUT submenu. As indicated in the menu's subtitle, the user selects SAVE DATA (1) to save data for January through June (Figure 22). SAVE DATA (2) covers the months July through December. This division is needed due to LOTUS 1-2-3's limit of eight menu items per customized menu. The user is now presented with a choice of six months (Figure 23). Selecting the appropriate month, saves the data to the appropriate month's financial reports and recalculates them so they are ready to be viewed or printed. The system then returns the user to the MAIN menu.

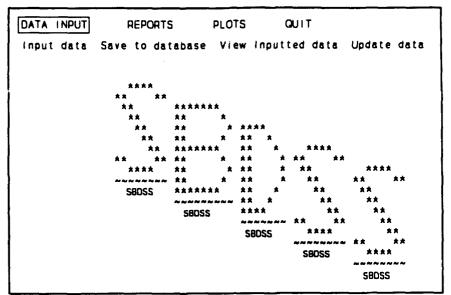


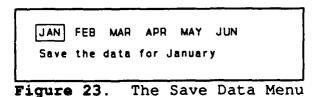
Figure 21. The Main Menu

```
INPUT DATA SAVE DATA (1) SAVE DATA (2) VIEW DATA (1) VIEW DATA (2)

Copy data to the database for January - June

[UPDATE DATA (1) UPDATE DATA (2)]
```

Figure 22. The Data Input Menu



The user may view and modify the data inputted for any month. From the DATA INPUT submenu, the user selects VIEW DATA (1) or VIEW DATA (2) (Figure 24). Now the user must select the appropriate month. Selecting a month brings the corresponding User Data Entry Form to the screen and transfers control back to the user. The user is now free to

modify the data in the same way that the data was inputted. When modifications are complete, the user presses the ALT and R keys to return the system to the MAIN menu.

INPUT DATA SAVE DATA (1) SAVE DATA (2) VIEW DATA (1) VIEW DATA (2)

View the data inputted for January - June

[UPDATE DATA (1) UPDATE DATA (2)]

Figure 24. The Data Input Menu

Again, the user selects DATA INPUT from the MAIN menu. From the DATA INPUT submenu, the user must select either UPDATE (1) or UPDATE (2) (Figure 25). The user then selects the appropriate month. After the system saves the data and recalculates the formulas in the financial reports, the system displays a warning message to the user (Figure 26). This message reminds the user to do a manual update to the data for every subsequent month up to the current month. Many financial reports either directly or indirectly use data that results from calculations in the previous month. Even if no change is required in the subsequent months, the user still must do the updates.

```
SAVE DATA (2) VIEW DATA (1) VIEW DATA (2) UPDATE DATA (1) UPDATE DATA (2) Update data inputted for January - June
[INPUT DATA SAVE DATA (1)]
```

Figure 25. The Data Input Menu

Figure 26. Update Data Warning Message

B. REPORTS

The financial reports for any of the last twelve months can be viewed or printed by selecting REPORTS from the MAIN menu (Figure 27). To view financial reports, select either VIEW (1) or VIEW (2) (Figure 28). The user further defines his choice by selecting the desired month from the submenu that appears (Figure 29). The system brings the first report to the display and then turns control over to the user. The user may now scroll up or down to view all the reports. The user should take extreme care not to add,

delete, or modify any of the data. When done viewing, the user must press the ALT and R keys to return the system to the MAIN menu.

DATA INPUT REPORTS PLOTS QUIT

View reports Print reports

Figure 27. The Main Menu

VIEW (1) VIEW (1) PRINT (1) PRINT (2)

View the financial reports for January - June

Figure 28. The Reports Menu

JAN FEB MAR APR MAY JUN
Scroll to view all financial reports for January

Figure 29. The View (1) Menu

The user also may print the reports for any month by selecting either PRINT (1) or PRINT (2) from the REPORTS submenu (Figure 30) and then by selecting the desired month (Figure 31). While printing continues in the background, the system returns the user to the REPORTS submenu. If the user does not wish to view or print any more reports, he/she should press the ESC key and return to the MAIN menu.

VIEW (1) VIEW (2) PRINT (1) PRINT (2)
Print the financial reports for January - June

Figure 30. The Reports Menu

JAN FEB MAR APR MAY JUN
Print all financial reports for January

Figure 31. The Print (1) Menu

C. PLOTS

Plots of the first four performance indicators can be obtained by selecting PLOTS from the MAIN menu (Figure 32). The user must select VIEW PLOTS from this submenu to begin defining that plot to view (Figure 33). The subsequent submenu allows the user to choose that performance indicator he/she would like to view. For instance, the user may want to view a plot of the margin percentage for the last twelve months ending in January. He/she would select MARGIN % (1) from the VIEW PLOTS submenu (Figure 34). The following menu allows the user to select JAN to identify the twelve month range of data that he/she wishes to view. Figure 35 is an example of a performance indicator plot. The user can return to the VIEW PLOTS submenu from the plot being displayed to view more plots by pressing the ESC key.

DATA INPUT REPORTS PLOTS QUIT
View plots Print plots

Figure 32. The Main Menu

VIEW PLOTS PRINT PLOTS

View plots of several performance indicators

Figure 33. The Plots Menu

MARGIN % (1) MARGIN % (2) RETURN ON CAPITAL (1) RETURN ON CAPITAL (2)

View a plot of the Margin % ending in January - June

[ASSET TURNOVER (1) ASSET TURNOVER (2) % GROSS MARGIN ON SALES(1)

% GROSS MARGIN ON SALES (2)]

Figure 34. The View Plots Menu

If the user views a plot that he/she would like printed, he/she should press the ESC key twice to exit the plot and return to the PLOTS submenu. Now the user must select the menu item PRINT PLOTS (Figure 35). The system begins printing the plot in the background while it returns the user to the VIEW PLOTS submenu. The user may now view other plots and then print them in the same way.

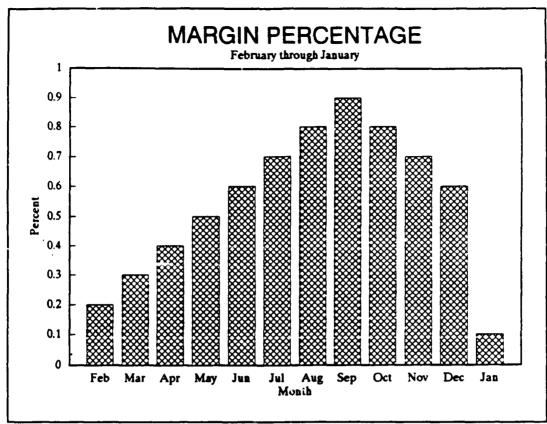


Figure 35. Plot of Return on Capital

VIEW PLOTS PRINT PLOTS

Print the plot most recently viewed

Figure 36. The Plots Menu

D. QUIT

The user also may save the current application and/or exit Lotus 1-2-3 by selecting QUIT from the MAIN menu (Figure 37). To save the current file under the same name and in the same location on disk, the user should select the submenu item SAVE & REPLACE (Figure 38). The system uses a

screen to tell the user that his/her file has been successfully saved and that he/she can safely exit Lotus 1-2-3 (Figure 39). The user is then returned to the MAIN menu.

DATA INPUT REPORTS PLOTS QUIT

Save & replace Save to new file Exit w/o saving

Figure 37. The Main Menu

SAVE & REPLACE SAVE TO NEW FILE QUIT WITHOUT SAVING Replace the file on disk with the copy in memory

Figure 38. The Quit Menu

Figure 39. The Successful Save Message

If the user wishes to save the file under a different filename or to a different location (ie. for a backup), the user should select SAVE TO NEW FILE from the QUIT submenu (Figure 40). The system displays the current filename and path in the menu area at the top of the screen (Figure 41). The user may edit the filename and path as required. When finished editing, the user must press the RETURN key to

begin saving the file. When the system displays "Ready" in the upper right hand corner of the screen, the user must press RETURN again to continue.

SAVE & REPLACE SAVE TO NEW FILE QUIT WITHOUT SAVING
Save the current file in memory to a disk under a new file name

Figure 40. The Quit Menu

Enter name of the file to save: D:\123r3\...

Figure 41. Lotus 1-2-3 Prompt for New File Name

This is necessary to handle the error condition arising when the filename already exists. There is no way to prompt the user to press RETURN to continue. If this occurs, Lotus 1-2-3 then asks the user via its own menu whether he/she wishes to cancel the operation, replace the file on disk with the file in memory, or to create a backup copy of a file on disk. Selecting CANCEL brings up the screen that tells the user that the file has been successfully saved. This is incorrect but cannot be avoided. After a short delay, the user is returned to the MAIN menu. Selecting REPLACE or BACKUP executes the indicated function, brings up the same screen, and returns the user to the MAIN menu.

The user may select QUIT WITHOUT SAVING from the QUIT submenu to exit Lotus 1-2-3 (Figure 42). The system displays a warning message alerting the user that any

changes not saved earlier will be lost when exiting (Figure 43). The system hands control over to the Lotus 1-2-3 QUIT submenu at this point. If the user selects YES, the system will beep a warning and tell him/her that changes to the file have not been saved, even if the file was previously saved. This results from Lotus 1-2-3 viewing the operation of the system's macro as the creation of changes to the file. The user need only select YES again to exit Lotus 1-2-3. If the user selects NO, he/she will be freed from macro control and left in the current spreadsheet. The Main menu may now be retrieved by pressing the ALT and R keys.

SAVE & REPLACE SAVE TO NEW FILE QUIT WITHOUT SAVING

Exit SBDSS without saving changes made to the file in memory

Figure 42. The Quit Menu

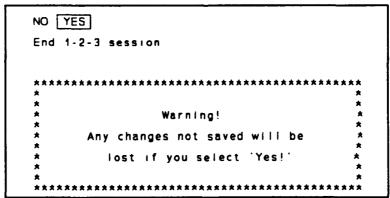


Figure 43. Lotus 1-2-3 Session Edit Prompt and System Exit Warning

V. CONCLUSION

This thesis examined the feasibility of developing a financial reporting system that could be applied to a small business. The financial reporting model was first developed from generic examples available in accounting textbooks. The model was then refined based on the example of an actual small business. The business provided sample information necessary to define the data requirements and functionality for the system. Finally, Lotus 1-2-3 Release 3.0 was selected as the prototyping environment for the Small Business Decision Support System (SBDSS).

A. RESEARCH RESULTS

The thesis research was guided by a primary and two subordinate research questions.

• Is it possible to automate the time intensive task of developing integrated financial statements and associated plots of performance indicators?

The prototype provides an affirmative answer to this question. The user only has to enter the data once and then use a minimum of keystrokes to produce accurate financial reports and plots of performance measures.

The next question referred to Lotus 1-2-3 Release 3.0 specifically.

• Is Lotus 1-2-3 Release 3.0 an effective development environment for a small business manager, who is a computer novice, to develop useful decision support tools?

This release of Lotus 1-2-3 has proved to be a powerful development environment for the SBDSS prototype. The learning curve is initially very steep before the user can produce substantive macros. The key to success in using this tool is to purchase a variety of Lotus 1-2-3 macro reference books. Lotus is so widely used that nearly any difficulty experienced by the novice has been seen before and documented. These books provide a rich variety of examples that can sometimes be adapted to work in the user's application with a minimum of effort.

The third question deals with data redundancy and consistency.

• Can a system be designed to reduce redundant data entry and thus improve data consistency across highly integrated financial statements?

The SBDSS prototype effectively reduces data entry redundancy and increases data consistency. The user inputs the monthly data only once in the User Data Entry Form despite the number of times that data is used in the various financial reports. Embedded formulas within the reports

ensure that data required in other reports is copied from where it was first received from the User Data Entry Form. Copying from a single source ensures data consistency.

In addition, prototyping proved to be a very useful methodology. Once a sufficient knowledge of the Lotus 1-2-3 macro language was obtained, development proceeded rapidly. The intended user was initially uncertain of system requirements. He provided a general outline of needed functionality and data availability. The first prototype provided the user with a working model that allowed him to refine his real requirements. The user was encouraged to experience the system's user interface and evaluate its suitability. Two successive revisions of the prototype were completed in a very short time due in part to the flexibility inherent in the system's macros. Testing, using sample data, was completed before letting the user evaluate each prototype and revision. Thus, potentially damaging errors in system design and coding were detected early in the development. Prototyping effectively binds the user and the developer into a single team to reduce communication barriers, clarify system requirements, detect errors, and speed development.

B. AREAS FOR FUTURE RESEARCH

Adding functionality to the existing system is the most likely area for future research. The system la :s

comprehensive analytical tools. If the system is capable of vertical and horizontal analysis, it could provide the user with information on the business's profitability, developing problems, weaknesses and strengths, and its operating efficiency. Knowing the pertinent trends and ratios only tells half the story. The underlying drivers to these measures often can only be examined by looking at all the reports for a period.

The primary weakness of the system is the design of the database. A forms based database is not conducive to formal database search, query, and data manipulation techniques. A database consisting of records and using the available database tools in Lotus 1-2-3 would be more efficient. It would require less code to do required data manipulation. Also, since reports only need to generated when required, the size of the database could be reduced significantly.

Portability could be increased in two ways. First,

Lotus 1-2-3 can access dBase files. This system could be modified to sit on top of any small businesses database if it is developed in Dbase. Second, the design of the reports could be automated so that a business could customize the system to their particular needs. This separate module would modify existing macros to handle the new data requirements as long as they met established financial reporting standards.

As the system becomes more complex, the menu item descriptions would not provide enough information to help the user in operating the system. Context sensitive help could easily be added and would only be a keystroke away in most circumstances. The screens also could be modified from the generic system logo to a more helpful screen tailored to the specific menu being displayed.

APPENDIX A

Appendix A contains the macros used in the SBDSS file. The macros are displayed exactly as they appear in Spreadsheet C. They were printed using Lotus 1-2-3's own printing function. The column and row headers are included to make referencing and maintenance easier. Many of the menus and several ranges cannot be printed on a single page due to their width. Therefore, the macros were printed several columns at a time from top to bottom. Each page consists of seventy-three rows. Pages containing adjacent columns in the same range of rows are arranged sequentially. Several macros are also very wide and to appear to be overwritten by the macro in the adjacent column. The macros are complete, however, and may be seen by entering the spreadsheet.

```
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            D
                                             MACROS
                                               10
                                                                                                                                                                                   {MAIN}
                                               1
                                                                                                                                                                                 {MAIN}
                                            MAIN
                                                                                                                                                                                     {PRANBOPP}
                                                                                                                                                                                       | BUbanner
                                                                                                                                                                                     (GOTO) banner
(GOTO) banner_corner
 10
                                                                                                                                                                                     WGDOIC (ESCAPE) &
 13
                                                                                                                                                                                   (MENUBRANCE MENU)
                                                                                                                                                                                       /WGRN
 16
                                          MENU
                                                                                                                                                                                 DATA IMPUT
                                                                                                                                                                                                                                                                                                                                                                                                                                                         REPORTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PLOTS
                                                                                                                                                                                 Imput data Save to database | MENUBRANCH DATA_IMPUT}
                                                                                                                                                                                                                                                                                                                                                                                                                                                         View reports Print [MENUBRANCH REPORTS]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                View plots Print plots [MENUBRANCH PLOTS]
 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Print reports
                                                                                                                                                                                     (ESC_2_MENU)
                                                                                                                                                                                                                                                                                                                                                                                                                                                             (BSC_2_MBNU)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (BSC_2_MBNU)
                                                                                                                                                                                     {GOTO}screen*
(GOTO]screen_corner*
| PRAMEOPP |
| WENUBRANCH MENU}
                                          ESC_2_MENU
 25
                                                                                                                                                                                     ESC_2_MENU}
                                                                                                                                                                                IMPUT DATA
Input the new data into the BaCopy data to the database for Copy data to the database for /REdatblaks | (MENUBRANCE PLACE_DATA1) | (MENUBRANCE PLACE_DATA2) | (MENUBRANCE PL
 28
                                          DATA IMPUT
 30
                                                                                                                                                                              /magachings
/Chank_balance_datblaks_21
/Cnotes_payable_datblaks_30
{GOTO|ertry_form
{GOTO|datblaks
 31
 32
 35
                                          BSC2_DATA_IMPUT[GOTO]screen*
 37
                                                                                                                                                                                       GOTO screen corner PRAMEOPP
 38
                                                                                                                                                                                         MENUBRANCH DATA INPUT)
 40
                                                                                                                                                                                   ESC_2_MBMU}
                                          PLACE DATA!
                                                                                                                                                                                                                                                                                                                                                                                                                                                  FSB
Save the data for February
/*BUfebruary
/*BUfebruary
/*Cdatblnks 1 feb_month
/*Cdatblnks 2 feb_sales
/*Cdatblnks 3 feb_stax
/*Cdatblnks 5 feb_stax
/*Cdatblnks 5 feb_stax
/*Cdatblnks 6 feb_customs
/*Cdatblnks 6 feb_customs
/*Cdatblnks 8 feb_inventory
/*Cdatblnks 8 feb_inventory
/*Cdatblnks 10 feb_advertise
/*Cdatblnks 11 feb_selierp
/*Cdatblnks 11 feb_seliers
/*Cdatblnks 12 feb_seliers
/*Cdatblnks 13 feb_seliers
/*Cdatblnks 14 feb_utilities
/*Cdatblnks 15 feb_intery
/*Cdatblnks 16 feb_intery
/*Cdatblnks 17 feb_intax
/*Cdatblnks 17 feb_intax
/*Cdatblnks 17 feb_intax
/*Cdatblnks 18 feb_other
/*Cdatblnks 19 feb_cash
/*BYdatblnks 20 feb_cash
/*BYdatblnks 21 feb_bank
/*Cdatblnks 22 feb_cash
/*Cdatblnks 23 feb_fermiture
/*Cdatblnks 25 feb_fermiture
/*Cdatblnks 27 feb_building
/*Cdatblnks 28 feb_acctpay
/*Cdatblnks 28 feb_acctpay
/*Cdatblnks 29 feb_taxpay
/*Cdatblnks 29 feb_taxpay
                                                                                                                                                                          Save the data for January

/**RUjanuary
/*Cdatblnks 1 jan_month
/*Cdatblnks 2 jan_sales
/*Cdatblnks 3 jan_stax
/*Cdatblnks 4 jan_interest
/*Cdatblnks 5 jan_customs
/*Cdatblnks 6 jan_customs
/*Cdatblnks 6 jan_customs
/*Cdatblnks 8 jan_inventory
/*Cdatblnks 9 jan_sellerp
/*Cdatblnks 10 jan_advertise
/*Cdatblnks 11 jan_exhibit
/*Cdatblnks 12 jan_seminars
/*Cdatblnks 13 jan_salaries
/*Cdatblnks 14 jan_utilities
/*Cdatblnks 15 jan_utilities
/*Cdatblnks 16 jan_interp
/*Cdatblnks 17 jan_intax
/*Cdatblnks 18 jan_other
/*Cdatblnks 19 jan_other
/*Cdatblnks 19 jan_cesh
/*Cdatblnks 21 jan_bank
/*Cdatblnks 22 jan_cesh
/*Cdatblnks 23 jan_cesh
/*Cdatblnks 24 jan_communable
/*Cdatblnks 25 jan_offequip
/*Cdatblnks 26 jan_ferniture
/*Cdatblnks 26 jan_ferniture
/*Cdatblnks 28 jan_ferniture
                                                                                                                                                                                 Save the data for January
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Save the data for February
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Save the data for March
                                                                                                                                                                                   /BUjabuary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /RUmarch
// Cdatbinks 1 mar month
// Cdatbinks 2 mar sales
// Cdatbinks 3 mar stax
// Cdatbinks 3 mar stax
// Cdatbinks 4 mar interest
// Cdatbinks 5 mar purchases
// Cdatbinks 6 mar customs
// Cdatbinks 7 mar freight
// Cdatbinks 8 mar inventory
// Cdatbinks 10 mar advertise
// Cdatbinks 10 mar advertise
// Cdatbinks 12 mar seminars
// Cdatbinks 12 mar seminars
// Cdatbinks 13 mar salaries
// Cdatbinks 14 mar utilities
// Cdatbinks 15 mar interp
// Cdatbinks 15 mar interp
// Cdatbinks 18 mar interp
// Cdatbinks 19 mar interp
// Cdatbinks 20 mar cash
// Kydatbinks 21 mar bank
// Cdatbinks 22 mar acctroybl
// Cdatbinks 23 mar preexp
// Cdatbinks 23 mar furniture
// Cdatbinks 25 mar furnit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /BUnarch
 44
45
46
47
48
49
51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /Cdatblaks 1 mar month
52
53
54
55
57
 58
59
60
 61
62
63
64
 65
68
67
 Ĭŧ
69
70
71
72
```

```
13
      16
17
18
19
                                                                                   QUIT
                                                                                   Save & replace [MBNUBRANCH FILE]
                                                                                                                                                                                                                                                                                                                                                  Save to new file
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Brit w/o saving
                                                                                      BSC_2_MENU}
20
21
22
23
24
25
                                                                            VIEW DATA (1)
View data imputted for JanuaryView data imputted for July -
{MENUBRANCH VIEW DATA1}
{BSC2_DATA_IMPUT}

VIEW DATA (2)

MENUBRANCH VIEW DATA2}

{BSC2_DATA_IMPUT}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             UPDATE DATA (1)
Update data inputted for Janua {BENUBRANCE UPDATE_DATA1}
{BSC2_DATA_INPUT}
         i
         32
         33435
         38
39
      42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JUN
Save the data for June
// RU june
// Cdatblaks 1 jun month
// Cdatblaks 2 jun males
// Cdatblaks 3 jun males
// Cdatblaks 5 jun males
// Cdatblaks 5 jun males
// Cdatblaks 5 jun males
// Cdatblaks 6 jun inventory
// Cdatblaks 7 jun maler
// Cdatblaks 8 jun inventory
// Cdatblaks 10 jun maler
// Cdatblaks 11 jun maler
// Cdatblaks 12 jun maler
// Cdatblaks 13 jun maler
// Cdatblaks 14 jun maler
// Cdatblaks 15 jun maler
// Cdatblaks 16 jun interp
// Cdatblaks 17 jun jun tax
// Cdatblaks 18 jun jun tax
// Cdatblaks 19 jun jun tax
// Cdatblaks 20 jun cash
// Edatblaks 21 jun bash
// Cdatblaks 22 jun consumable
// Cdatblaks 23 jun jun preexp
// Cdatblaks 25 jun flerniture
// Cdatblaks 25 jun flerniture
// Cdatblaks 25 jun flerniture
// Cdatblaks 25 jun maler
// Cdatblaks 25 jun flerniture
// Cdatblaks 25 jun maler
// Cdatblaks 25 jun male
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MAY
Save the data for May
/RUsay
/Cdatblnks_1 may_month
/Cdatblnks_2 may_sales
/Cdatblnks_3 may_stax
/Cdatblnks_4 may_interest
/Cdatblnks_5 may_purchases
/Cdatblnks_5 may_purchases
/Cdatblnks_6 may_custons
/Cdatblnks_6 may_custons
/Cdatblnks_8 may_inventory
/Cdatblnks_8 may_sellexp
/Cdatblnks_10 may_advertise
/Cdatblnks_11 may_seminars
/Cdatblnks_12 may_seminars
/Cdatblnks_13 may_seminars
/Cdatblnks_14 may_utilities
/Cdatblnks_15 may_intexp
/Cdatblnks_15 may_intexp
/Cdatblnks_16 may_intexp
/Cdatblnks_18 may_other
/Cdatblnks_19 may_intexp
/Cdatblnks_19 may_dvds
/Cdatblnks_20 may_dvds
/Cdatblnks_21 may_bank
/Cdatblnks_22 may_dvds
/Cdatblnks_23 may_consumable
/Cdatblnks_24 may_consumable
/Cdatblnks_25 may_offequip
/Cdatblnks_25 may_offequip
/Cdatblnks_27 may_building
/Cdatblnks_28 may_acctpay
/Cdatblnks_28 may_acctpay
/Cdatblnks_29 may_taxpay
                                                                Save the data for April
/Ruapril
/Cdatblaks_1 apr_month
/Cdatblaks_2 apr_sales
/Cdatblaks_3 apr_stax
/Cdatblaks_4 apr_interest
/Cdatblaks_5 apr_customs
/Cdatblaks_6 apr_customs
/Cdatblaks_7 apr_freight
/Cdatblaks_9 apr_selexp
/Cdatblaks_10 apr_advertise
/Cdatblaks_11 apr_selexp
/Cdatblaks_11 apr_selaries
/Cdatblaks_12 apr_selaries
/Cdatblaks_13 apr_tavel
/Cdatblaks_14 apr_utilities
/Cdatblaks_15 apr_tavel
/Cdatblaks_16 apr_intexp
/Cdatblaks_18 apr_other
/Cdatblaks_19 apr_dds
/Cdatblaks_20 apr_cash
/RVdatblaks_21 apr_selaries
/Cdatblaks_22 apr_actrcvbl
/Cdatblaks_22 apr_actrcvbl
/Cdatblaks_23 apr_offequip
/Cdatblaks_24 apr_consumable
/Cdatblaks_26 apr_freaiture
/Cdatblaks_27 apr_boilding
/Cdatblaks_28 apr_acttps
      43
                                                                                Save the data for April
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Save the data for May
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Save the data for June
   44
45
46
47
                                                                                   /RUapril*
      48
      52
   53
54
55
56
57
         62
63
         64
         65
         66
```

7

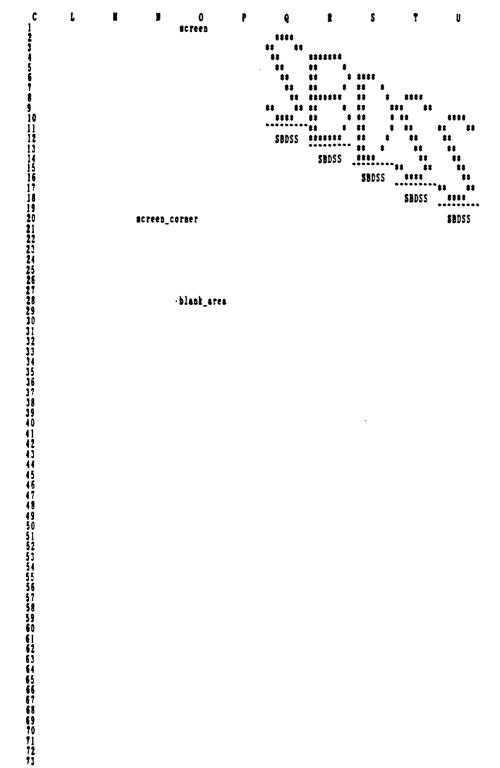
G

ı

C

61 70 71

```
ı
                                                                                                 I
                                                                                                                                        j
                                                                                                                                                          I
UPDATE DATA (2)
Update data inputted for July - December {#EMUBRANCH UPDATE_DATA2}
{BSC2_DATA_INPUT}
```



·blant_area

```
/BVdatblaks 30 feb notespay
/Cdatblaks 31 feb longdebt
/Cdatblaks 32 feb capatock
/Cdatblaks 33 feb shortborrow
/Cdatblaks 34 feb isscapatk
/Cdatblaks 35 feb shortdebt
/RPfebruare
                                                                                                                   /RVdatblaks 30 jan motespay
/Cdatblaks 31 jan longdebt
/Cdatblaks 32 jan capstock
/Cdatblaks 33 jan mortborrow
/Cdatblaks 34 jan immediate
/Cdatblaks 35 jan chertdebt
C 74 75 76 77 78 79
                                                                      ٨
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /RVdatblnks 30 mar motespay

/Cdatblnks 31 mar longdebt

/Cdatblnks 32 mar capstock

/Cdatblnks 33 mar shortborrow

/Cdatblnks 34 mar isscapstk

/Cdatblnks 35 mar shortdebt

/RPmarks
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /RPmarch | RECALC march | /RECALC march | /Cdata entry mar_data | RSC_2_MENU |
  80
81
                                                                                                                         RP january
                                                                                                                                                                                                                                                                                                     /RPfebruary
                                                                                                                         RECALC January
                                                                                                                                                                                                                                                                                                     [RECALC february]
                                                                                                                     /Cdata_entry_jan_data
{BSC_2_MENU}
                                                                                                                                                                                                                                                                                                    /Cdata_entry_feb_data*
|BSC_2_MBNU}
  82
83
  84
85
                                                                                                                                                                                                                                                                                            AUG
Save the data for August
//RUaugust
//Cdatblaks 1 aug month
//Cdatblaks 2 aug sales
//Cdatblaks 3 aug stax
//Cdatblaks 5 aug stax
//Cdatblaks 5 aug stax
//Cdatblaks 6 aug ustoms
//Cdatblaks 6 aug ustoms
//Cdatblaks 8 aug inventory
//Cdatblaks 8 aug inventory
//Cdatblaks 10 aug advertige
//Cdatblaks 11 aug enhibit
//Cdatblaks 12 aug seninars
//Cdatblaks 13 aug seninars
//Cdatblaks 14 aug utilities
//Cdatblaks 15 aug travel
//Cdatblaks 17 aug intexp
//Cdatblaks 18 aug other
//Cdatblaks 19 aug dvds
//Cdatblaks 20 aug acctrcybl
//Cdatblaks 21 aug bank
//Cdatblaks 22 aug acctrcybl
//Cdatblaks 23 aug preexp
//Cdatblaks 23 aug fequip
//Cdatblaks 25 aug offequip
//Cdatblaks 25 aug offequip
//Cdatblaks 25 aug ferniture
//Cdatblaks 25 aug ferniture
//Cdatblaks 25 aug soctpay
//Cdatblaks 31 aug longdebt
//Cdatblaks 32 aug shortborrow
//Cdatblaks 33 aug shortborrow
//Cdatblaks 33 aug shortdebt
//RPaugust
//RPaugust
//RPaugust
//RCatablaks 33 aug shortdebt
//Cdatblaks 35 aug shortdebt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEP
Save the data for September
/RUseptember
/Cdatblnks 1 sep_month
/Cdatblnks 2 sep_sales
/Cdatblnks 3 sep_stax
/Cdatblnks 4 sep_interest
/Cdatblnks 5 sep_purchases
/Cdatblnks 6 sep_customs
/Cdatblnks 7 sep_freight
/Cdatblnks 7 sep_freight
/Cdatblnks 10 sep_advertige
/Cdatblnks 11 sep_sehibit
/Cdatblnks 12 sep_seliars
/Cdatblnks 13 sep_salaries
/Cdatblnks 14 sep_utilities
/Cdatblnks 15 sep_interp
/Cdatblnks 16 sep_interp
/Cdatblnks 16 sep_interp
/Cdatblnks 17 sep_intar
/Cdatblnks 18 sep_other
                                                                                                                 JUL
Save the data for July
/RUJuly
/RUJuly
/RUJuly
/Cdatbloks 1 jul month
/Cdatbloks 2 jul sales
/Cdatbloks 3 jul sales
/Cdatbloks 5 jul enterest
/Cdatbloks 5 jul purchases
/Cdatbloks 6 jul customs
/Cdatbloks 7 jul freight
/Cdatbloks 9 jul sellerp
/Cdatbloks 9 jul sellerp
/Cdatbloks 10 jul advertige
/Cdatbloks 11 jul exhibit
/Cdatbloks 12 jul seminars
/Cdatbloks 13 jul salaries
/Cdatbloks 14 jul utilities
/Cdatbloks 15 jul travel
/Cdatbloks 16 jul intexp
/Cdatbloks 17 jul intex
/Cdatbloks 18 jul other
/Cdatbloks 22 jul cash
/RVdatbloks 20 jul cash
/RVdatbloks 22 jul acctrcybl
/Cdatbloks 22 jul acctrcybl
/Cdatbloks 25 jul offequip
/Cdatbloks 25 jul offequip
/Cdatbloks 26 jul furniture
/Cdatbloks 28 jul acctrcybl
/Cdatbloks 29 jul taxpay
/RVdatbloks 30 jul motespay
/RVdatbloks 31 jul longdebt
/Cdatbloks 31 jul longdebt
/Cdatbloks 32 jul captock
/Cdatbloks 32 jul captock
/Cdatbloks 32 jul captock
/Cdatbloks 32 jul captock
/Cdatbloks 35 jul shortdebt
/RPjuly
/RECALC july
//dataloks 35 jul shortdebt
//RPjuly
                            PLACE DATAS
                                                                                                                    lar
                                                                                                                                                                                                                                                                                                  AUG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEP
                                                                                                                    Save the data for July
  88
89
90
  9]
  92
  93
  94
95
  96
97
  98
  99
 100
 102
  104
105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cdatblaks 17 sep intery
/Cdatblaks 18 sep other
/Cdatblaks 18 sep other
/Cdatblaks 19 sep dvds
/Cdatblaks 20 sep cash
/RVdatblaks 22 sep acctrcvbl
/Cdatblaks 22 sep acctrcvbl
/Cdatblaks 23 sep preexp
/Cdatblaks 24 sep consumable
/Cdatblaks 25 sep offequip
/Cdatblaks 25 sep acctpay
/Cdatblaks 25 sep acctpay
/Cdatblaks 25 sep acctpay
/Cdatblaks 25 sep acctpay
/Cdatblaks 30 sep accessay
/Cdatblaks 30 sep accessay
/Cdatblaks 31 sep consumoth
/Cdatblaks 32 sep capatock
/Cdatblaks 33 sep shortborrow
/Cdatblaks 34 sep inscapath
/Cdatblaks 34 sep inscapath
/Cdatblaks 35 sep shortdebt
/RPseptember
  106
107
  108
  109
  110
  111
 112
114
 116
 118
119
 120
121
122
127
 12:
                                                                                                                    (RPjuly | RECALC july)
                                                                                                                                                                                                                                                                                                    (RPaugust | RECALC august)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (RPseptember | RBCALC september)
 125
127
                                                                                                                    /Cdata_entry_jul_data* {BSC_2_MENU}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /Cdata_entry_sep_data*
[BSC_2_MBNU]
                                                                                                                                                                                                                                                                                                    /Cdata_entry aug_data 
{BSC_2_MBNU}
  129
                            VIEW DATAL
  130
131
132
133
134
135
                                                                                                                                                                                                                                                                                                  View the data for Pebruary (GOTO) feb_data
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                View the data for March (GOTO)mar_data
                                                                                                                     View the data for January
                                                                                                                     [GOTO] jan_data
                            VIEW DATA2
                                                                                                                    View the data for July (GOTO) jul_data
                                                                                                                                                                                                                                                                                                  View the data for August [GOTO] aug_data
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 View the data for September [GOTO] sep_data
  136
  138
                           OPDATE DATAI
  141
                                                                                                                     Save the data for January
                                                                                                                                                                                                                                                                                                    Save the data for February
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Save the data for March
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /RUmarch*
/Cmar datblaks datblaks
/Cdatblaks l mar month*
/Cdatblaks 2 mar males
/Cdatblaks 3 mar males
                                                                                                                    /BUjanuary
/Cjan datblnks datblnks
/Cdatblnks j jan_sonth
/Cdatblnks j jan_soles
/Cdatblnks j jan_stax
                                                                                                                                                                                                                                                                                                  /BUfebruary
/Cfeb datblaks datblaks
/Cdatblaks 1 feb month
/Cdatblaks 2 feb sales
/Cdatblaks 3 feb star
  142
 143
144
145
```

```
/EVdatblnks 30 apr notespay
/Cdatblnks 31 apr longdebt
/Cdatblnks 12 apr capstock
/Cdatblnks 33 apr shortborrow
/Cdatblnks 34 apr isscapstk
/Cdatblnks 35 apr shortdebt
/RPanil
                                                                                                                                                                                                                                                                                                                                                            /RVdatblaks 30 jun motespay
/Cdatblaks 31 jun longdebt
/Cdatblaks 32 jun capstock
/Cdatblaks 33 jun motespay
/Cdatblaks 34 jun isscapstk
/Cdatblaks 34 jun isscapstk
                                                                                                                                                                                         /RVdatblaks 30 may notespay
/Cdatblaks 31 may longdebt
/Cdatblaks 32 may capstock
/Cdatblaks 33 may shortborrow
/Cdatblaks 34 may isscapstk
/Cdatblaks 35 may shortdebt
                                                                                                                                                                                                                                                                                                                                                                /BPjune*
{BBCALC june}
/Cdata_entry_jun_data*
{BSC_2_MENU}
80
                                                                                                                                                                                                 (RPmay
| RBCALC may)
                              {BBCALC april}
                             /Cdata_entry apr_data (BSC_2_MENU)
                                                                                                                                                                                              /Cdata_entry may_data
|BSC_2_MBNU}
82
83
84
85
86
87
88
89
                                                                                                                                                                                  MOV
Save the data for November

/RUnovember
/Cdatblnks 1 nov month
/Cdatblnks 2 nov males
/Cdatblnks 3 nov star
/Cdatblnks 5 nov purchases
/Cdatblnks 5 nov purchases
/Cdatblnks 6 nov customs
/Cdatblnks 7 nov freight
/Cdatblnks 9 nov mellexp
/Cdatblnks 10 nov mellexp
/Cdatblnks 11 nov mellexp
/Cdatblnks 12 nov mellexp
/Cdatblnks 13 nov salaries
/Cdatblnks 14 nov utilities
/Cdatblnks 15 nov travel
/Cdatblnks 16 nov intax
/Cdatblnks 17 nov intax
/Cdatblnks 18 nov cher
/Cdatblnks 19 nov dods
/Cdatblnks 20 nov cash
/Rydatblnks 21 nov prexp
/Cdatblnks 22 nov prexp
/Cdatblnks 23 nov prexp
/Cdatblnks 23 nov freniture
/Cdatblnks 25 nov sotespay
/Cdatblnks 25 nov sotespay
/Cdatblnks 35 nov shortborrow
/Cdatblnks 35 nov shortdebt
/RPnovember
/RECALC november
//Cdatblnks 35 nov shortdebt
/RPnovember
/RECALC november
                       Save the data for October
/RUoctober
/Cdatblaks I oct month
/Cdatblaks 2 oct males
/Cdatblaks 3 oct star
/Cdatblaks 3 oct star
/Cdatblaks 5 oct purchases
/Cdatblaks 6 oct customs
/Cdatblaks 7 oct freight
/Cdatblaks 7 oct inventory
/Cdatblaks 9 oct sellesp
/Cdatblaks 10 oct meterige
/Cdatblaks 10 oct meterige
/Cdatblaks 11 oct meterige
/Cdatblaks 12 oct meterige
/Cdatblaks 13 oct meterige
/Cdatblaks 15 oct utilities
/Cdatblaks 15 oct travel
/Cdatblaks 16 oct interp
/Cdatblaks 16 oct interp
/Cdatblaks 18 oct other
/Cdatblaks 18 oct other
/Cdatblaks 19 oct dvds
/Cdatblaks 20 oct cash
/Cdatblaks 20 oct cash
/Cdatblaks 20 oct cash
/Cdatblaks 20 oct cash
                                                                                                                                                                                                                                                                                                                                                                Save the data for December /RUdecember /Cdatblobs_1_dec_month
                            Save the data for October
                                                                                                                                                                                             Save the data for Movember
                                                                                                                                                                                                                                                                                                                                                           Save the data for December

AUdecember

/Cdatblnhs_1 dec_month
/Cdatblnhs_3 dec_stax

/Cdatblnhs_3 dec_stax

/Cdatblnhs_5 dec_purchases
/Cdatblnhs_5 dec_purchases
/Cdatblnhs_6 dec_customs
/Cdatblnhs_7 dec_freight
/Cdatblnhs_9 dec_sellexp
/Cdatblnhs_10 dec_advertise
/Cdatblnhs_11 dec_exhibit
/Cdatblnhs_12 dec_sellexp
/Cdatblnhs_13 dec_salaries
/Cdatblnhs_13 dec_salaries
/Cdatblnhs_15 dec_travel
/Cdatblnhs_16 dec_travel
/Cdatblnhs_17 dec_intax
/Cdatblnhs_19 dec_dvds
/Cdatblnhs_19 dec_dvds
/Cdatblnhs_21 dec_prexp
/Cdatblnhs_21 dec_prexp
/Cdatblnhs_21 dec_prexp
/Cdatblnhs_22 dec_custom
/Cdatblnhs_23 dec_prexp
/Cdatblnhs_24 dec_custuding
/Cdatblnhs_25 dec_offequip
/Cdatblnhs_25 dec_offequip
/Cdatblnhs_26 dec_building
/Cdatblnhs_27 dec_building
/Cdatblnhs_28 dec_custom
/Cdatblnhs_32 dec_shortborrow
/Cdatblnhs_31 dec_Iongdebt
/Cdatblnhs_32 dec_shortborrow
/Cdatblnhs_33 dec_shortborrow
/Cdatblnhs_35 dec_shortdebt
/RPdecember

RECALC december
/RECALC december
90
91
 32
 94
95
 36
97
 98
 99
 100
  101
 102
 103
  104
                       /Cdatblnks 19 oct dvds
/Cdatblnks 20 oct cash
/RVdatblnks 20 oct cash
/RVdatblnks 21 oct bank
/Cdatblnks 22 oct acctrcvbl
/Cdatblnks 22 oct acctrcvbl
/Cdatblnks 25 oct offequip
/Cdatblnks 25 oct offequip
/Cdatblnks 26 oct furniture
/Cdatblnks 27 oct building
/Cdatblnks 28 oct acctpay
/Cdatblnks 28 oct acctpay
/Cdatblnks 30 oct accepay
/Cdatblnks 31 oct longdebt
/Cdatblnks 32 oct capstock
/Cdatblnks 32 oct shortborrow
/Cdatblnks 34 oct isscapsth
/Cdatblnks 35 oct shortdebt
/RPoctober
  108
 109
 110
 121
122
123
                             /RPoctaber
                                                                                                                                                                                                 /RPnovember
                                                                                                                                                                                                                                                                                                                                                                  /RPdecember
                                                                                                                                                                                                                                                                                                                                                                 {RBCALC december}
/Cdata_entry dec_data*
{BSC_2_MBNU}
 125
                               RECALC october)
                                                                                                                                                                                                 RECALC november
                            /Cdata_entry_oct_data*
                                                                                                                                                                                               /Cdata_entry nov_data 
{BSC_2_MBNU}
 129
  130
                           View the data for April {GOTO}apr_data
                                                                                                                                                                                                                                                                                                                                                                View the data for June {GOTO}jun_data
 131
                                                                                                                                                                                             View the data for May
132
                                                                                                                                                                                               (GOTO)may_data
134
135
                         View the data for October {GOTO}oct_data
                                                                                                                                                                                             View the data for November (GOTO)nov_data
                                                                                                                                                                                                                                                                                                                                                                 View the data for December (GOTO)dec_data
  140 APR
  141 Save the data for April
                                                                                                                                                                                             Save the data for May
                                                                                                                                                                                                                                                                                                                                                                Save the data for June
                                                                                                                                                                                           /RUmay
/Coay datbloks datbloks
/Cdatbloks laay month
/Cdatbloks laay males
/Cdatbloks laay sales
/Cdatbloks laay star
                       /RUapril
                                                                                                                                                                                                                                                                                                                                                                 /RUjune
                       /BUaprii
/Capr datbluks datbluks
/Cdatbluks lapr month
/Cdatbluks lapr sales
/Cdatbluks lapr star
                                                                                                                                                                                                                                                                                                                                                               /Sugue

/Cjun_datblnks_datblnks_

/Cdatblnks_1_jun_sonth_

/Cdatblnks_1_jun_sales_

/Cdatblnks_1_jun_stax_
 143
```

```
/Cdatblaks 4 jan interest
/Cdatblaks 4 jan interest
/Cdatblaks 5 jan purchases
/Cdatblaks 6 jan customs
/Cdatblaks 7 jan freight
/Cdatblaks 9 jan sellerp
/Cdatblaks 10 jan advertise
/Cdatblaks 11 jan exhibit
/Cdatblaks 12 jan selaries
/Cdatblaks 13 jan salaries
/Cdatblaks 14 jan utilities
/Cdatblaks 15 jan intexp
/Cdatblaks 16 jan intexp
/Cdatblaks 16 jan intexp
/Cdatblaks 17 jan intexp
/Cdatblaks 18 jan coher
/Cdatblaks 19 jan cash
/RVdatblaks 21 jan bank
/Cdatblaks 22 jan acctrovbl
/Cdatblaks 23 jan preexp
/Cdatblaks 24 jan offequip
/Cdatblaks 25 jan fermiture
/Cdatblaks 26 jan furniture
/Cdatblaks 28 jan acctpay
/Cdatblaks 29 jan taxpay
/RVdatblaks 30 jan notespay
/Cdatblaks 32 jan caspatock
/Cdatblaks 32 jan caspatock
/Cdatblaks 33 jan jan shortborrow
/Cdatblaks 33 jan jan shortborrow
/Cdatblaks 33 jan jan shortdebt
/RPJanuary
/RBCALC january
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /Cdatblaks 4 feb interest
/Cdatblaks 5 feb purchases
/Cdatblaks 5 feb purchases
/Cdatblaks 7 feb freight
/Cdatblaks 9 feb sellerp
/Cdatblaks 9 feb sellerp
/Cdatblaks 10 feb advertise
/Cdatblaks 11 feb exhibit
/Cdatblaks 12 feb sesinars
/Cdatblaks 13 feb sesinars
/Cdatblaks 14 feb utilities
/Cdatblaks 15 feb travel
/Cdatblaks 16 feb intexp
/Cdatblaks 17 feb intexp
/Cdatblaks 18 feb other
/Cdatblaks 19 feb dvds
/Cdatblaks 20 feb cash
/RVdatblaks 21 feb bank
/Cdatblaks 22 feb acctrcybl
/Cdatblaks 23 feb preexp
/Cdatblaks 25 feb offequip
/Cdatblaks 26 feb furniture
/Cdatblaks 27 feb building
/Cdatblaks 28 feb acctpay
/Cdatblaks 29 feb taxpay
/Cdatblaks 29 feb taxpay
/Cdatblaks 29 feb caspatock
/Cdatblaks 31 feb longdebt
/Cdatblaks 32 feb caspatock
/Cdatblaks 33 feb shortborrow
/Cdatblaks 33 feb shortborrow
/Cdatblaks 33 feb shortdebt
/RPfebruary
{RECALC february}

{RECALC february}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /Cdatblabs 4 har interest
/Cdatblabs 5 har purchases
/Cdatblabs 6 har customs
/Cdatblabs 6 har customs
/Cdatblabs 9 har freight
/Cdatblabs 9 har freight
/Cdatblabs 9 har sellerp
/Cdatblabs 9 har sellerp
/Cdatblabs 10 har advertine
/Cdatblabs 12 har seminars
/Cdatblabs 13 har seminars
/Cdatblabs 13 har nalaries
/Cdatblabs 15 har travel
/Cdatblabs 15 har travel
/Cdatblabs 16 har interp
/Cdatblabs 19 har over
/Cdatblabs 19 har over
/Cdatblabs 19 har over
/Cdatblabs 19 har over
/Cdatblabs 20 har cash
/RVdatblabs 20 har cash
/RVdatblabs 21 har banh
/Cóatblabs 22 har consumable
/Cdatblabs 25 har offequip
/Cdatblabs 25 har furniture
/Cdatblabs 28 har furniture
/Cdatblabs 28 har notespay
/Cdatblabs 28 har acctpay
/Cdatblabs 30 har hotespay
/Cdatblabs 32 har capstock
/Cdatblabs 32 har capstock
/Cdatblabs 33 har shortborrow
/Cdatblabs 33 har shortborrow
/Cdatblabs 33 har shortdebt
/RParch
/RParch
/RParch
                                                                                                                               A
      148
149
150
151
152
153
        154
155
      156
157
158
159
160
161
    162
163
      164
165
    166
167
      168
169
      170
    171
172
173
174
175
176
    178
179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (BPearch
                                                                                                                                                                                                                        /RPJenuary
{RBCALC january}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RPfebruary
  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RECALC february)
                                                                                                                                                                                                                            GOTO: warning
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GOTO | warning
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GOTO warning
  182
183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRAMBOPP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (PRANEOPP)
                                                                                                                                                                                                                            PRAMEOFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GOTO Warning corner { WAIT ENOW+ETIME(0,0,5)} | BSC_2_MENU}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GOTO WATBING corner WAIT ENOW+ @TIME(0,0,5)}
                                                                                                                                                                                                                        GOTO warning corner [WAIT WNOW-OTIME 0.0,5)]
  184
185
                                                                                                                                                                                                                        RSC_2_MENU)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BSC 2 MBNU)
    186
                                                   UPDATE DATAS
                                                                                                                                                                                                           JUL
Save the data for July

// RUjuly
// Cjui datblnks datblnks
// Cdatblnks 1 jul sonth
// Cdatblnks 2 jul sales
// Cdatblnks 3 jul stax
// Cdatblnks 5 jul sales
// Cdatblnks 5 jul sales
// Cdatblnks 5 jul jurchases
// Cdatblnks 6 jul jurchases
// Cdatblnks 7 jul freight
// Cdatblnks 8 jul inventory
// Cdatblnks 9 jul sellexp
// Cdatblnks 10 jul advertise
// Cdatblnks 11 jul exhibit
// Cdatblnks 12 jul seminars
// Cdatblnks 13 jul salaries
// Cdatblnks 14 jul utilities
// Cdatblnks 15 jul intexp
// Cdatblnks 16 jul intexp
// Cdatblnks 17 jul intexp
// Cdatblnks 18 jul other
// Cdatblnks 20 jul cash
// Cdatblnks 21 jul data
// Cdatblnks 22 jul cash
// Cdatblnks 22 jul cash
// Cdatblnks 22 jul cash
// Cdatblnks 22 jul offequip
// Cdatblnks 24 jul consumable
// Cdatblnks 25 jul offequip
// Cdatblnks 27 jul building
// Cdatblnks 28 jul acctpay
    189
                                                                                                                                                                                                                   Save the data for July
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Save the data for August
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Save the data for September
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Save the data for August
/RUaugust
/Caug datbinks datbinks
/Cdatbinks 1 aug month
/Cdatbinks 2 aug month
/Cdatbinks 3 aug month
/Cdatbinks 3 aug matax
/Cdatbinks 5 aug purchases
/Cdatbinks 5 aug purchases
/Cdatbinks 6 aug customs
/Cdatbinks 7 aug freight
/Cdatbinks 9 aug mellery
/Cdatbinks 9 aug mellery
/Cdatbinks 11 aug meniory
/Cdatbinks 12 aug meniory
/Cdatbinks 13 aug meniars
/Cdatbinks 13 aug meniars
/Cdatbinks 14 aug utilities
/Cdatbinks 15 aug intexp
/Cdatbinks 17 aug intexp
/Cdatbinks 18 aug intexp
/Cdatbinks 19 aug dvds
/Cdatbinks 22 aug cash
/Cdatbinks 22 aug consumable
/Cdatbinks 22 aug consumable
/Cdatbinks 24 aug consumable
/Cdatbinks 25 aug furniture
/Cdatbinks 26 aug furniture
/Cdatbinks 28 aug acctpay
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Save the data for September /BUREPtember /BUREPtember /Coep datblaks datblaks /Cdatblaks 1 sep month /Cdatblaks 2 sep sales /Cdatblaks 3 sep stax /Cdatblaks 3 sep stax /Cdatblaks 5 sep jurchases /Cdatblaks 6 sep_customs /Cdatblaks 6 sep_customs /Cdatblaks 7 sep freight /Cdatblaks 10 sep_advertise /Cdatblaks 11 sep_exhibit /Cdatblaks 12 sep_seniars /Cdatblaks 12 sep_seniars /Cdatblaks 14 sep_stilities /Cdatblaks 15 sep_travel /Cdatblaks 15 sep_intax /Cdatblaks 16 sep_intax /Cdatblaks 18 sep_other /Cdatblaks 18 sep_other /Cdatblaks 18 sep_other /Cdatblaks 20 sep_cash /Cdatblaks 22 sep_cash /Cdatblaks 22 sep_cossumple /Cdatblaks 23 sep_preexp /Cdatblaks 23 sep_preexp /Cdatblaks 25 sep_feguip /Cdatblaks 25 sep_feguip /Cdatblaks 25 sep_feguip /Cdatblaks 25 sep_feguip /Cdatblaks 27 sep_building /Cdatblaks 27 sep_building /Cdatblaks 28 sep_acctpay
    190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /RUaugust
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /RUmeptember
  191
    192
    193
  194
  195
196
    197
  198
      199
  200
    202
  203
204
205
206
207
  208
209
  212
213
214
215
216
217
```

```
Cdatblaks 1 jun_interest
/Cdatblaks 5 jun_purchases
/Cdatblaks 6 jun_customs
/Cdatblaks 6 jun_customs
/Cdatblaks 6 jun_inventory
/Cdatblaks 9 jun_sellerp
/Cdatblaks 10 jun_sellerp
/Cdatblaks 11 jun_exhibit
/Cdatblaks 12 jun_selberp
/Cdatblaks 13 jun_selbers
/Cdatblaks 15 jun_travel
/Cdatblaks 15 jun_travel
/Cdatblaks 15 jun_travel
/Cdatblaks 15 jun_travel
/Cdatblaks 16 jun_interp
/Cdatblaks 18 jun_other
/Cdatblaks 19 jun_dvas
/Cdatblaks 20 jun_cash
/RVdatblaks 22 jun_sectrcvbl
/Cdatblaks 22 jun_sectrcvbl
/Cdatblaks 23 jun_prerp
/Cdatblaks 24 jun_consumable
/Cdatblaks 25 jun_furniture
/Cdatblaks 26 jun_furniture
/Cdatblaks 27 jun_building
/Cdatblaks 28 jun_acctpay
/Cdatblaks 29 jun_taxpay
//Cdatblaks 29 jun_taxpay
//Cdatblaks 30 jun_notespay
//Cdatblaks 31 jun_capstock
//Cdatblaks 32 jun_shortborrow
//Cdatblaks 33 jun_shortdebt
//RPjune
//RRCALC june}
                                        /Cdatblaks 4 apr_interest //Cdatblaks 5 apr_purchases //Cdatblaks 5 apr_custons //Cdatblaks 7 apr_freight //Cdatblaks 8 apr_inventory //Cdatblaks 9 apr_sellexp //Cdatblaks 10 apr_advertise //Cdatblaks 11 apr_exhibit //Cdatblaks 12 apr_sesinars //Cdatblaks 13 apr_sesinars //Cdatblaks //Cdatblaks 13 apr_sesinars //Cdatblaks //Cdatblaks //Cdatblaks //Cdatblaks //Cdat
  147
                                                                                                                                                                                                                                                                                                                                           /Cdatbloks_4 say_interest
    148
    153
    151
                                              /Cdatbloks 13 apr sealnars
/Cdatbloks 13 apr salaries
/Cdatbloks 14 apr utilities
/Cdatbloks 15 apr travel
/Cdatbloks 16 apr intexp
  156
                                      /Cdatbints 16 apr interp
/Cdatbints 18 apr interp
/Cdatbints 18 apr inter
/Cdatbints 18 apr other
/Cdatbints 20 apr cash
/Rydatbints 20 apr cash
/Rydatbints 22 apr acctrcybl
/Cdatbints 23 apr presp
/Cdatbints 24 apr consumable
/Cdatbints 25 apr furniture
/Cdatbints 25 apr furniture
/Cdatbints 26 apr furniture
/Cdatbints 28 apr acctpay
/Cdatbints 29 apr taxpay
/Rydatbints 30 apr soctespay
/Cdatbints 31 apr longdebt
/Cdatbints 32 apr capstock
/Cdatbints 33 apr shortborrow
/Cdatbints 33 apr shortborrow
/Cdatbints 35 apr shortdebt
/Cdatbints 35 apr shortdebt
                                                                                                                                                                                                                                                                                                                                                     /Cdatbloks 19 may dvds
/Cdatbloks 20 may cash
  162
                                                                                                                                                                                                                                                                                                                                                     /RVdatbloks 21 may bank
/Cdatbloks 22 may acctrcvbl
    165
                                                                                                                                                                                                                                                                                                                                               /Cdatblnks 22 may_acctrcvbl
/Cdatblnks 23 may_preexp
/Cdatblnks 24 may_consumable
/Cdatblnks 25 may_offequip
/Cdatblnks 25 may_furniture
/Cdatblnks 27 may_building
/Cdatblnks 28 may_acctpay
/Cdatblnks 28 may_acctpay
/Cdatblnks 30 may_notespay
/Cdatblnks 31 may_longebt
/Cdatblnks 32 may_capstock
/Cdatblnks 33 may_shortborrow
/Cdatblnks 34 may_isscapstk
/Cdatblnks 35 may_shortdebt
/RPmay
  166
  167
  168
  169
                                                /Cdatblnks_35 apr_shortdebt
                                                  /RPapril
|RECALC april
|GOTO|warning
|PRAMECEP|
                                                                                                                                                                                                                                                                                                                                                       RPmay
RBCALC may!
GOTO warning
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /RPjune*
{RBCALC june}
180
181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GOTO | warning
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRAMEOPP
                                                                                                                                                                                                                                                                                                                                                          PRANSCPPI
182
183
                                                  GOTO Warning corner [WAIT @NOW+@TIME(0,0,5)]
                                                                                                                                                                                                                                                                                                                                                          GOTO WARDING corner [WAIT CHOW+CTIME: 0,0,5]}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GOTO | warning corner [WAIT ENGW+ETIME(0,0.5)]
                                                BSC_2_MENU
                                                                                                                                                                                                                                                                                                                                                       (BSC_2_MBNU)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           {BSC_2_MBNU}
186
187
188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Save the data for December
                                      Save the data for October /RUOctober /RUOctober /Coct datblnks datblnks /Coatblnks 1 oct month /Cdatblnks 2 oct males /Cdatblnks 3 oct star /Cdatblnks 3 oct star /Cdatblnks 5 oct purchases /Cdatblnks 5 oct purchases /Cdatblnks 7 oct freight /Cdatblnks 7 oct freight /Cdatblnks 9 oct inventory /Cdatblnks 10 oct mentory /Cdatblnks 11 oct exhibit /Cdatblnks 12 oct seminars /Cdatblnks 13 oct malaries /Cdatblnks 14 oct utilities /Cdatblnks 15 oct travel /Cdatblnks 16 oct intexp /Cdatblnks 17 oct other /Cdatblnks 18 oct other /Cdatblnks 19 oct other /Cdatblnks 19 oct other /Cdatblnks 20 oct cash /RVdatblnks 22 oct oct offequip /Cdatblnks 23 oct oct offequip /Cdatblnks 23 oct offequip /Cdatblnks 25 oct offequip /Cdatblnks
                                              Save the data for October
                                                                                                                                                                                                                                                                                                                                                     Save the data for November
  189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /RUdecember
  130
                                              /BUoctaber
                                                                                                                                                                                                                                                                                                                                                     /RUnovember
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /#Udecember*
/Cdec_datblnks datblnks*
/Cdatblnks 1 dec_month
/Cdatblnks 2 dec_sales*
/Cdatblnks 3 dec_stax
/Cdatblnks 4 dec_interest*
/Cdatblnks 5 dec_purchases
/Cdatblnks 6 dec_customs
/Cdatblnks 7 dec_freight
/Cdatblnks 8 dec_inventory*
/Cdatblnks 9 dec_sellers*
                                                                                                                                                                                                                                                                                                                                                 /Eunovember

/Chov datblaks datblaks

/Cdatblaks 1 nov month

/Cdatblaks 2 nov males

/Cdatblaks 3 nov males

/Cdatblaks 4 nov interest

/Cdatblaks 5 nov purchases

/Cdatblaks 6 nov customs

/Cdatblaks 8 nov inventory

/Cdatblaks 8 nov monthless
  191
  192
  194
  195
    198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /Cdatblnks 7 dec freight
/Cdatblnks 8 dec_inventory
/Cdatblnks 9 dec sellerp
/Cdatblnks 10 dec_advertise
/Cdatblnks 11 dec_exhibit
/Cdatblnks 12 dec_seminars
/Cdatblnks 13 dec_seminars
/Cdatblnks 14 dec_utilities
/Cdatblnks 16 dec_intexp
/Cdatblnks 16 dec_intexp
/Cdatblnks 17 dec_intax
/Cdatblnks 18 dec_intexp
/Cdatblnks 19 dec_dvds
/Cdatblnks 19 dec_dvds
/Cdatblnks 20 dec_dvds
/Edatblnks 20 dec_cash
/Edatblnks 21 dec_bnnk
/Cdatblnks 22 dec_acctrcybl
/Cdatblnks 23 dec_preexp
/Cdatblnks 24 dec_consumable
/Cdatblnks 25 dec_offequip
/Cdatblnks 25 dec_freniture
/Cdatblnks 27 dec_building
/Cdatblnks 28 dec_acctpay
  199
                                                                                                                                                                                                                                                                                                                                                   /Cdatblaks 9 nov sellexp
/Cdatblaks 10 nov advertise
/Cdatblaks 11 nov exhibit
/Cdatblaks 12 nov seminars
  200
201
  202
201
                                                                                                                                                                                                                                                                                                                                                 /Cdatbinks 12 nov seminars
/Cdatbinks 13 nov seminars
/Cdatbinks 14 nov utilities
/Cdatbinks 15 nov travel
/Cdatbinks 16 nov intexp
/Cdatbinks 17 nov intexp
/Cdatbinks 18 nov other
  204
209
                                                                                                                                                                                                                                                                                                                                                 /Cdatblnks 18 nov other //Cdatblnks 18 nov other //Cdatblnks 19 nov odds //Cdatblnks 20 nov cash //RVdatblnks 21 nov bank //Cdatblnks 22 nov acctrcvbl //Cdatblnks 23 nov preexp //Cdatblnks 23 nov offequip //Cdatblnks 25 nov offequip //Cdatblnks 25 nov offequip //Cdatblnks 25 nov building //Cdatblnks 28 nov acctpay
  210
211
215
```

```
/Cdatblaks 29 aug tarpay
/Rydatblaks 30 aug notespay
/Cdatblaks 31 aug longdebt
/Cdatblaks 32 aug capstock
/Cdatblaks 33 aug shortborrow
/Cdatblaks 34 aug isscapstk
/Cdatblakg 35 aug shortdebt
/RPaugust
/RECALC august
/GOTO/warning
/PANEOPP}
/GOTO/warning
                                                                                                                                                                              /Cdatblaks_29 gep_taxpsy
/RVdatblaks_30 sep_actespay
/Cdatblaks_31 sep_longdebt
/Cdatblaks_32 sep_capstock
/Cdatblaks_33 sep_shortborrow
/Cdatblaks_34 sep_isscapstk
/Cdatblaks_35 sep_shortdebt
/RPseptember
                                           /Cdatblaks 29 jul tarpay /RVdatblaks 30 jul notespay /Cdatblaks 31 jul longdebt /Cdatblaks 32 jul capstock /Cdatblaks 33 jul shortborrow /Cdatblaks 34 jul inscapetk /Cdatblaks 35 jul shortdebt /RPjuly {RECALC july} {GOTO]warning {PRANEOPP}
                          A
/RPseptember
|RBCALC september|
|GOTO|warning
                                            GOTO WATELES

{PRANEOPP}

{GOTO WATELES COTHET

{WAIT @MOW+@TIME(0,0,5)}

{ESC_2_MERU}
                                                                                                                                                                               FRANKOPP |
GOTO WATRING COTRET
GOTO WATRING COTRET
[WAIT CHOW+CTINE(0,0,5)]
ESC_2_ERNU
                                                                                                              GOTO warning corner (WAIT GNOW+GTIME(0,0,5)) [ESC_2 MENU]
                                           VIEW (1)
View the fibancial reports forView the fibancial reports forFrint the fibancial reports forEMUBRANCE VIEW_REPORTS1} { MEMUBRANCE VIEW_REPORTS2} { MEMUBRANCE PRINT_REPORTS1} { MEMUBRANCE PRINT_REPORTS1}
          REPORTS
239
240
241
242
243
                                           {GOTO}screen*
{GOTO}screen_corner*
{PRAMEOFF}
{MENUBRANCH REPORTS}
{SC_2_MENU}
         ESC_2_REPORTS
244
245
246
247
          VIEW REPORTS! JAN
250
251
                                            Scroll to view all financial rScroll to view all financial rScroll to view all financial r {GOTO}february {GOTO}march
252
253
254
255
          VIEW REPORTS2 JUL
                                                                                                             AUG
                                            Scroll to view all financial rScroll to view all financial rScroll to view all financial r
256
257
258
                                                                                                             (GOTO) august
                                                                                                                                                                               (GOTO) september
                                            {GOTO} july
          PRINT_REPORTS! JAN
                                            259
260
          PRINT REPORTS2 JUL
                                            Print all financial reports foPrint all financial reports foPrint all financial reports fo
/PPCARaugust AGQ
(BSC_2_REPORTS) (BSC_2_REPORTS)

RSC_2_REPORTS)

(BSC_2_REPORTS)
264
265
266
267
                                            VIEW PLOTS

View plots of several performaPrint the plot most recently viewed {BENUBRANCR VIEW_PLOT}

{BSC_2_PLOTS}

PRINT PLOTS

{PPCAICAG(ESC){BSC}{BSC}}

{ESC_2_VUPLOT}
268
269
270
271
          PLOTS
                                            GOTO acreen GOTO acreen corner FRAMEOFF |
WENUBRANCE PLOTS |
          BSC_2_PLOTS
274
275
276
277
278
279
                                             BSC 2 MBNU)
          ALEA PROL
                                            MARGIN % (1)
                                                                                                             MARGIN 1 (2)
                                                                                                                                                                              RETURN ON CAPITAL (1)
280
281
282
283
                                            View a plot of the Wargin 3 enview a plot of the Wargin 3 enview a plot of the Return on C {WENUBRANCE MONTEL} {WENUBRANCE MONTEL} {BSC_2_VUPLOT} {BSC_2_VUPLOT} {BSC_2_VUPLOT}
284
285
                                            [GOTO] screen [GOTO] screen _corner [FRANEOFF] [HENUBRANCH VIEW_PLOT] [ESC_2_PLOTS]
           ESC_2_VUPLOT
286
287
288
289
290
291
                                                                                                                                                                                                                                        ERR
           SCRATCE AREA
                                                                                                     RIR
                                                                                                                                                                       RER
```

```
/Cdatblaks 29 gov taxpay //RVdatblaks 30 gov notespay //Cdatblaks 31 gov longdebt //Cdatblaks 32 gov capatock //Cdatblaks 33 gov shortborrow //Cdatblaks 34 gov inscapath //Cdatblaks 35 gov shortdebt //RPovesber //RECALC govesber //RECALC govesber
                                /Cdatblaks 29 oct taxpay /RVdatblaks 29 oct taxpay /Cdatblaks 31 oct sotespay /Cdatblaks 31 oct longdebt /Cdatblaks 32 oct capstock /Cdatblaks 33 oct shortborrow /Cdatblaks 34 oct isscapstk /Cdatblaks 35 oct shortdebt /RPoctober
                                                                                                                          ı
                                                                                                                                                                                                                                                                                                                                                                                                                        Cdatblaks 29 dec taxpay / RVdatblaks 30 dec motespay / Cdatblaks 31 dec longdebt / Cdatblaks 32 dec capstock / Cdatblaks 33 dec shortborrow / Cdatblaks 35 dec shortborrow / Cdatblaks 35 dec shortdebt / RVdecember / RECALC december / RECALC december / GOTOlwarning / GOTOlwarning / GOTOlwarning / RECALC december / ROSTOLWARNING / RECALC december / RECALC
 23456789012345
222222233335
222222233335
                                      /RPoctober
                                      RECALC october)
GOTO warning
(PRAMEOFF)
                                                                                                                                                                                                                                                                                                                                                                                                                                GOTO | warning | PRANBOPP |
                                      GOTO warning corner [WAIT @NOW+@TIME(0,0,5)]
                                                                                                                                                                                                                                  GOTO warning corner [WAIT @MOW+@TIME(0,0,5)]
                                                                                                                                                                                                                                                                                                                                                                                                                                GOTO | warning corner [WAIT CHOW+CTIME(0,0,5)]
                                    BSC_2_MENU)
                                                                                                                                                                                                                                  ESC_2_EBNU}
                                                                                                                                                                                                                                                                                                                                                                                                                                BSC 2 MENU
  236
                               PRINT (2)
Print the financial reports for July - December {MRMUBRANCE PRINT_REPORTS2} { BSC_2_REPORTS}
 238
239
 240
241
242
243
244
245
246
246
249
250
251
                               Screll to view all financial rScroll to view all financial rScroll to view all financial r {GOTO}april {GOTO}may {GOTO}may
 252
253
 254
255
256
257
                               Scroll to view all financial rScroll to view all financial rScroll to view all financial r [GOTO]october [GOTO]november [GOTO]december
258
259
                                                                                                                                                                                                                              MAT
                                                                                                                                                                                                                                                                                                                                                                                                                            JON
                               260
261
 262
263
                               Print all financial reports foPrint all financial reports foPrint all financial reports fo/PPCARoctober AGQ {PPCARnovember AGQ {BSC_2_REPORTS} {BSC_2_REPORTS} {BSC_2_REPORTS}
  264
  265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
                            RETURN ON CAPITAL (2)
                                                                                                                                                                                                                            ASSET TURNOVER (1)
                                                                                                                                                                                                                                                                                                                                                                                                                         ASSET TURNOVER (2)
                               View a plot of the Beturn on CView a plot of the Asset TurnoView a plot of the Asset Turno (MENUBRANCH MONTHS) (MENUBRANCH MONTHS) (MESC_2_VUPLOT) (MESC_2_VUPLOT)
 280
  282
283
 284
285
 286
287
288
289
290
291
                                                                                                                                                                                                     ERR
                                                                                                                                                                                                                                                                                                                                                                                                  ERR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13R
```

```
C
                                                                                                                                                                 JAN

View a plot for Pebruary throuview a plot for March through

/RUscratch area

/RUscratch area

/RVian margin cratch al2

/RVian margin scratch al2

/RVian margin scratch al2

/RVian margin scratch al2

/RVian margin scratch al3

/RViun margin scratch al3

/RV
                                       MONTE!
294
295
296
297
298
299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 View a plot for april thro

/RUGCTATCh area

/RYJan_margin_scratch_a10°/
/RYJeb_margin_scratch_a11°/
/RVmar_margin_scratch_a12°/
/RVmar_margin_scratch_a2°/
/RVmar_margin_scratch_a2°/
/RVjul_margin_scratch_a3°/
/RVjul_margin_scratch_a4°/
/RVaug_margin_scratch_a6°/
/RVoot_margin_scratch_a6°/
/RVoot_margin_scratch_a6°/
/RVdcc_margin_scratch_a8°/
/RVdcc_margin_scratch_a9°/
/RGCTBAscratch_area

IAPR_MAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 View a plot for April through
   300
 301
302
 303
 304
 306
 308
 309
                                                                                                                                                                    IPEB JAN OTPHARGIN PERCENTAGE
 310
                                                                                                                                                                                                                                                                                                                                                                                                                                 IMAR PEB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAPR MAR"
OTPHÄRGIN PERCENTAGE"
                                                                                                                                                                                                                                                                                                                                                                                                                               OTPHÄRGIN PERCENTAGE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TSApril through March
                                                                                                                                                                                                                                                                                                                                                                                                                             TSMarch through February TIMonth
                                                                                                                                                                        TSFebruary through January
314
315
                                                                                                                                                                        TPPercent"
                                                                                                                                                                                                                                                                                                                                                                                                                                 TTPercent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPercent'
                                                                                                                                                                      (ESC) VQ
(BSC_2_VUPLOT)
                                                                                                                                                                                                                                                                                                                                                                                                                               |BSC|VQ
|BSC|2_VUPLOT|
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (ESC)VQ
(ESC_2_VUPLOT)
 316
 317
                                       MONTB2
                                                                                                                                                                 JUL
View a plot for August throughView a plot for September throview a plot for October throug
/#Uscratch area /#Uscratch area
318
319
320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEP
 321
 322
323
324
325
326
327
328
 329
330
332
333
334
335
                                                                                                                                                                    TAUG JUL'
OTPHARGIN PERCENTAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOCT SEP OTPWIRGIN PERCENTAGE
                                                                                                                                                                                                                                                                                                                                                                                                                             ISEP AUG
OTPHÄRGIN PERCENTAGE
                                                                                                                                                                        TSAugust through July
 336
                                                                                                                                                                                                                                                                                                                                                                                                                                 TSSeptember through August
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TSOctober through September
 337
                                                                                                                                                                      Timonth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tillosth'
                                                                                                                                                                      TYPercent*
                                                                                                                                                                                                                                                                                                                                                                                                                               TPercent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TPercent'
 338
                                                                                                                                                                      (BSC)VQ
(BSC_2_VUPLOT)
                                                                                                                                                                                                                                                                                                                                                                                                                               (BSC)VQ
(BSC_2_VUPLOT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (BSC)VQ
|BSC_2_VUPLOT)
339
 340
341
342
343
                                                                                                                                                              JAN
View a plot for February throwliew a plot for Warch through
/#Uscratch_area /#Uscratch_are
                                       MONTB3
                                                                                                                                                                                                                                                                                                                                                                                                                             FEB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WAK
Fiew a plot for April through
RUscratch area
/RVian_return_scratch_al0
/RVieb_return_scratch_al1
/RVanr_return_scratch_al2
/RVanr_return_scratch_al
/RVanr_return_scratch_al
/RVian_return_scratch_al
/RVian_return_scratch_al
 344
 345
346
347
 348
 349
350
351
352
353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /Ryjub_return_scratch_s4/Ryjub_return_scratch_s4/RYsep_return_scratch_s6/RYsep_return_scratch_s6/RYoct_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec_return_scratch_s8/RYdec
354
355
 356
357
 358
359
                                                                                                                                                                        /GRGTBAscratch_area
                                                                                                                                                                                                                                                                                                                                                                                                                             /GRGTBAscratch_area
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /GRGTBAscratch_area
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       XAPR MAR
                                                                                                                                                                      OTFRETURN ON CAPITAL
                                                                                                                                                                                                                                                                                                                                                                                                                               OTPRETURN ON CAPITAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTFRETURN ON CAPITAL
 360
361
362
363
364
                                                                                                                                                                                                                                                                                                                                                                                                                             TSMarch through February TINonth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TSApril through Warch
                                                                                                                                                                      TSPebruary through January
                                                                                                                                                                      TIMonth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tillonth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPercent*
[BSC]VQ
[BSC_2_VUPLOT]
                                                                                                                                                                                                                                                                                                                                                                                                                               TPercent'
                                                                                                                                                                        TYPercent
                                                                                                                                                                                                                                                                                                                                                                                                                                 (ESC)VQ
(ESC_2_VUPLOT)
                                                                                                                                                                      ESC 2 VUPLOT
```

```
I
                                                                                                                                                                                                                                                                                                                                                                                                                                                            G
 293
                       View a plot for May through Apview a plot for June through Meller apply through Japan Bargin Scratch area.

Aller argin Scratch arga.

Aller argin Scratch arga.

Aller argin Scratch arga.

Aller argin Scratch arg
 294
295
                         View a plot for May throug / BUscratch_area / BV lan_margin_scratch_a? / BV feb_margin_scratch_all / BV mar_margin_scratch_all / BV mar_margin_scratch_all / BV may_margin_scratch_all / BV may_margin_scratch_all / BV may_margin_scratch_all / BV margin_scratch_all / BV ma
 298
299
  300
 301
  302
  304
 308
                                                                                                                                                                                                         GRGTBAscratch area
                                                                                                                                                                                                                                                                                                                                                                                /GRGTBAscratch_area
                            OTPHARGIN PERCENTAGE
                                                                                                                                                                                                                                                                                                                                                                              OTPHARGIN PERCENTAGE"
                                                                                                                                                                                                      ÖTPHÄRGIN PERCENTAGE"
312
                            TSMay through April
                                                                                                                                                                                                      TSJune through May
                                                                                                                                                                                                                                                                                                                                                                             TSJuly through June TIBonth
313
                            Timonth
                                                                                                                                                                                                      Timonth
                                                                                                                                                                                                                                                                                                                                                                             TTPercent (BSC) VQ (BSC_2_VUPLOT)
                                                                                                                                                                                                      TTPercent*
(BSC)VQ
(BSC_2_VUPLOT)
314
315
                            TTPercent (BSC) VQ (BSC_2_VUPLOT)
316
318
                         View a plot for November throuView a plot for December throuVIEW GRAPH FOR JANUARY THROUGH /RUscratch_area /RUscratch_area /Ruscratch_area
                                                                                                                                                                                                    /Wise a plot for December

/RUscratch_area

/RUjan_margin_scratch_a2

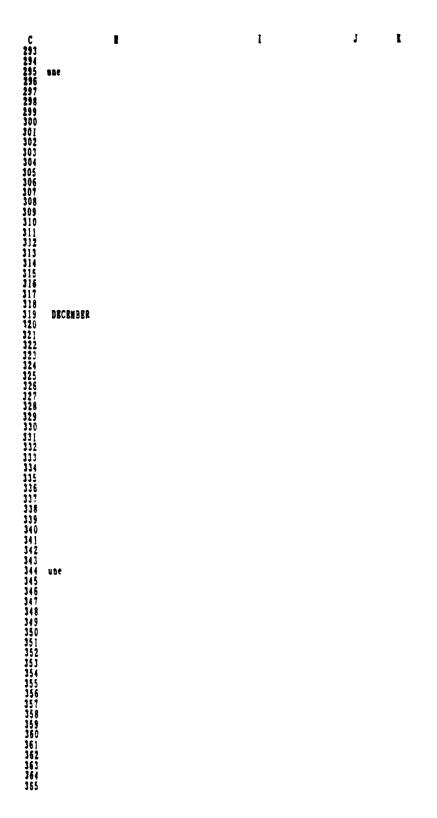
/RUfeb_margin_scratch_a3

/RUmar_margin_scratch_a4

/RUmar_margin_scratch_a5

/RUmay_margin_scratch_a5

/RUmay_margin_scratch_a5
                         /RUscratch_area
/RVian_margin_scratch_a1
/RVfeb_margin_scratch_a4
/RVmar_margin_scratch_a5
/RVmar_margin_scratch_a6
/RVmay_margin_scratch_a7
/RViun_margin_scratch_a9
/RViun_margin_scratch_a9
/RViun_margin_scratch_a10
/RVsep_margin_scratch_a11
/RVoct_margin_scratch_a12
/RVmcv_margin_scratch_a12
/RVmcv_margin_scratch_a12
/RVmcv_margin_scratch_a2
/GRGTBAscratch_area
                                                                                                                                                                                                                                                                                                                                                                           /RUscratch area
/RVian margin scratch al
/RVieb margin scratch al
/RVieb margin scratch al
/RVanr margin scratch al
/RVanr margin scratch al
/RVanr margin scratch al
/RViun margin scratch al
/RViun margin scratch al
/RViun margin scratch al
/RVang margin scratch al
/RVang margin scratch al
/RVanc margin scratch al
/RVoct margin scratch al
/RVoct margin scratch al
/RVoct margin scratch al
 322
323
324
125
                                                                                                                                                                                                     /Bvun margin scratch a?
/Bvun margin scratch a?
/Bvun margin scratch a8
/Bvun margin scratch a9
/Bver margin scratch a10
/Bvor margin scratch a11
/Bvor margin scratch a11
/Bvor margin scratch a11
/Bvor margin scratch a11
331
111
                              /GRGTBAscratch_area
                                                                                                                                                                                                         GRGTBAscratch_area
                                                                                                                                                                                                                                                                                                                                                                                /GRGTBAscratch_area
                                                                                                                                                                                                                                                                                                                                                                             IJAN DBC
OTPWARGIN PERCENTAGE
334
                            INOV OCT"
OTPHARGIN PERCENTAGE"
                                                                                                                                                                                                     ADEC NOV OTPHARGIN PERCENTAGE
                                                                                                                                                                                                                                                                                                                                                                             TSJanuary through December THouth
                              TSNovember through October
                                                                                                                                                                                                      TSDecember through Movember
 336
 337
                             TiMonth
                                                                                                                                                                                                      TIMonth
                            Typercent (BSC)VQ (BSC)2_VUPLOT)
                                                                                                                                                                                                      Typercent | BSC | VQ
                                                                                                                                                                                                                                                                                                                                                                              Typercent | BSC| VQ
 340
                                                                                                                                                                                                         BSC 2 VUPLOT
                                                                                                                                                                                                                                                                                                                                                                                (BSC_2_VUPLOT)
                            View a plot for May through ApView a plot for June through Wiew a plot for July through J
/RUscratch_area /RUscratch_area /RUscratch_area
344
345
                         /BUscratch area
/BVjan return scratch a9
/BVjeb return scratch a10
/BVsar return scratch a11
/BVsar return scratch a12
/BVsar return scratch a1
/BVjun return scratch a2
/RVjun return scratch a3
/RVjun return scratch a3
/BVsay return scratch a4
/RVsep return scratch a5
/BVscr return scratch a6
/BVscr return scratch a6
/BVscr return scratch a7
/BVdcr return scratch a7
/BVdcr return scratch a8
/GROTBAscratch area
                                                                                                                                                                                                                                                                                                                                                                            /BUscratch area
/BVjan return scratch a7
/BVjeb return scratch a8
/BVan return scratch a9
/BVan return scratch a10
/BVany return scratch a11
/RVjun return scratch a12
/BVaul return scratch a12
/BVaug return scratch a2
/BVsep return scratch a3
/BVoct return scratch a4
/RVnov return scratch a5
/BVdec return scratch a5
/BVdec return scratch a6
/GRGTBAscratch area
                                                                                                                                                                                                     /Ryan_return_scratch_a8"
/Ryleb_return_scratch_a8"
/Ryleb_return_scratch_a10"
/Ryan_return_scratch_a10"
/Ryan_return_scratch_a12"
/Ryjun_return_scratch_a12"
/Ryjun_return_scratch_a2"
/Ryun_return_scratch_a3"
/Ryen_return_scratch_a3"
346
352
 353
                                                                                                                                                                                                      /Rveep return scratch a4/8voct return scratch a5/Rvnov return scratch a6/Rvdec return scratch a7
                                                                                                                                                                                                                                                                                                                                                                             /GRGTBAscratch area viol jun otpreturn on capital
                            /GRGTBAscratch_area
                                                                                                                                                                                                      /GRGTBAscratch_area
 359
                            OTPRETURN ON CAPITAL
                                                                                                                                                                                                      OTFRETURN ON CAPITAL
 360
 361
                             TSMay through April
                                                                                                                                                                                                       TSJune through May
                                                                                                                                                                                                                                                                                                                                                                              TSJuly through June
362
                            Timosth
                                                                                                                                                                                                      TIMOBED
                                                                                                                                                                                                                                                                                                                                                                                Timonth
                                                                                                                                                                                                                                                                                                                                                                              TTPercent (BSC) VQ (BSC_2_VUPLOT)
                             TTPercent.
                                                                                                                                                                                                       TTPercent*
 363
364
365
                              (BSC) VQ
(ESC_2_VUPLOT)
                                                                                                                                                                                                         |BSC|VQ
|BSC_2_VUPLOT|
```



```
C
                                                                         4
  366
                              MONT84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                oview a plot for October the

/RUscratch_arga
/RYjan_return_scratch_a4
/RYfeb_return_scratch_a5
/RYan_return_scratch_a6
/RYan_return_scratch_a7
/RYany_return_scratch_a9
/RYjun_return_scratch_a9
/RYjun_return_scratch_a10
/RYang_return_scratch_a11
/RYang_return_scratch_a12
/RYoct_return_scratch_a12
/RYoct_return_scratch_a2
/RYdec_return_scratch_a2
/RYdec_return_scratch_a3
/GRGTBAscratch_area
IOCT_SEP
OTPRETURN_ON_CAPITAL
TSOctober_through_Septembe
                                                                                                                       View a plot for angust the /RUscratch_area*
/RYscratch_area*
                                                                                                                            View a plot for august through View a plot for September thro View a plot for October throug
                                                                                                                                                                                                                                                                                                            /RUscratch area
/RVjan_return_stratch_a5
/RVjan_return_stratch_a6
/RVsar_return_stratch_a6
/RVsar_return_stratch_a8
/RVsar_return_stratch_a9
/RVjun_return_stratch_a10
/RVjun_return_stratch_a10
/RVjun_return_stratch_a12
/RVsep_return_stratch_a12
/RVsep_return_stratch_a12
/RVsep_return_stratch_a2
/RVnov_return_stratch_a3
/RVdct_return_stratch_a3
/RVdct_return_stratch_a4
/RVdct_return_stratch_a4
/RVdct_return_stratch_a4
  370
                                                                                                                                                                                                                                                                                                                 /RUscratch_area
  371
 372
373
374
375
  178
 382
383
  384
                                                                                                                          XAUG JUL"
OTPRETURN ON CAPITAL
                                                                                                                                                                                                                                                                                                              ISBP AUG"
OTPRETURN ON CAPITAL"
  385
                                                                                                                          TSAugust through July
 386
387
388
                                                                                                                                                                                                                                                                                                                 TSSeptember through August
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TSOctober through September
                                                                                                                          Timonth
                                                                                                                                                                                                                                                                                                                 TIMonth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Timonth
                                                                                                                             Typercent.
                                                                                                                                                                                                                                                                                                                 TYPercent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPercent
  389
                                                                                                                            (BSC)VQ
|BSC_2_VUPLOT)
                                                                                                                                                                                                                                                                                                                  (BSC)VQ
|BSC_2_VUPLOT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (BSC)VQ
|BSC_2_vUPLOT)
  390
  391
                                                                                                                       JAN
View a plot for February throuview a plot for March through
/RUscratch area*
/RVjan asset scratch al?*
/RVjan asset scratch al?*
/RVjan asset scratch al?*
/RVan asset scratch al?*
/RVjun asset scratch a
                        MONTH5
  393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  View a plot for April through /BUscratch_area
  394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /RUscratch_area
/RVjan_asset_scratch_al0
/RVfeb_asset_scratch_al1
/RVsar_asset_scratch_al2
/RVsar_asset_scratch_al2
/RVjun_asset_scratch_a2
/RVjun_asset_scratch_a3
/RVjun_asset_scratch_a4
/RVsap_asset_scratch_a5
/RVsep_asset_scratch_a6
/RVoot_asset_scratch_a7
/RVnov_asset_scratch_a9
/GVGcTBAscratch_a9
/GGGTBAscratch_area
  395
396
397
 398
399
  400
  40!
  402
  403
  404
  405
  406
  407
408
                                                                                                                        /GRGTBAscratch_area
IPBB JAN
OTPASSET TURNOVER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /GRGTBAscratch_area
IAPR_MAR*
OTFASSET_TURMOVER*
                                                                                                                                                                                                                                                                                                                 /GRGTBAscratch_area
                                                                                                                                                                                                                                                                                                              IMAR PEB
OTPASSET TURNOVER
410
411
412
                                                                                                                            TSPebruary through January
                                                                                                                                                                                                                                                                                                                 TSWarch through February
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TSApril through March
                                                                                                                          Timonth
                                                                                                                                                                                                                                                                                                                 TiMonth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TIMonth
                                                                                                                            TYPercent.
                                                                                                                                                                                                                                                                                                                 Typercest
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPercent'
                                                                                                                          (BSC)VQ
(BSC_2_VUPLOT)
                                                                                                                                                                                                                                                                                                                 (BSC)VQ
(BSC_2_VUPLOT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (BSC)VQ
(BSC_2_VUPLOT)
  415
416
418
419
420
421
                                                                                                                       JUL
View a plot for August throughView a plot for September throView a plot for October throug
//RUscratch_area //RUscratch_a
                          MONTEE
 422
423
 424
425
 426
427
428
429
430
431
432
433
                                                                                                                          RAUG JUL
OTPASSET TURNOVER
                                                                                                                                                                                                                                                                                                               ISEP AUG
OTPASSET TURNOVER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOCT SEF
  43E
437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTPASSET TURNOVER
                                                                                                                            TSAugust through July
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TSOctober through September
                                                                                                                                                                                                                                                                                                                 TSSeptember through August
                                                                                                                          TIMonth
```

```
G
                                                                  t
366
367
368
               View a plot for Movember ti
/BUscratch_area
178
379
380
381
382
383
                                                                                                                                                                                                                                   IJAN DEC
384
                                                                                                                          OTFRETURN ON CAPITAL"
                                                                                                                                                                                                                                   OTPRETURN ON CAPITAL"
                 OTPRETURN ON CAPITAL"
                                                                                                                         TSDecember through November
386
                 TSNovember through October
                                                                                                                                                                                                                                   TSJanuary through December
                                                                                                                                                                                                                                   TIBonth
                 Timonth
                                                                                                                          Tillonth
                                                                                                                                                                                                                                   TYPercent
388
                 TYPercent
                                                                                                                          TPercent'
                 (BSC)VQ
(BSC_2_VUPLOT)
                                                                                                                          {BSC|VQ
{BSC_2_VUPLOT}
                                                                                                                                                                                                                                   {BSC}VG
{BSC_2_VOPLOT}
389
390
39
392
              393
394
197
199
400
401
402
403
404
406
409
410
                                                                                                                                                                                                                                  TSJuly through June TIMonth
411
                TIMonth Tipercent
                                                                                                                          Timosth
                                                                                                                                                                                                                                   Trercent.
                                                                                                                           Trercent.
                                                                                                                          (BSC)VQ
|BSC_2_VUPLOT)
                 | BSC | VQ
| BSC 2 VUPLOT |
                                                                                                                                                                                                                                   |BSC|VQ
|BSC_2_VUPLOT|
              View a plot for November throwView a plot for December throwView a plot for December throwView a plot for December throwView GRAPH FOR JANUARY THROUGH /RUscratch_area /RUscra
419
                                                                                                                                                                                                                                uview Graph for January Thi

/BUscratch_area

/BVjan_asset_scratch_a?

/BVfeb_asset_scratch_a?

/BVmay_asset_scratch_a?

/BVmay_asset_scratch_a?

/BVyan_asset_scratch_a?

/BVyin_asset_scratch_a?

/BVyin_asset_scratch_a?

/BVyang_asset_scratch_a?

/BVoot_asset_scratch_a!

/BVoot_asset_scratch_a!?

/BVdec_asset_scratch_a!?

/GRGTBAc.b!?2..c:m!?2

IJAH_DEC

OTFASSET_TURNOVER
420
421
422
431
432
                 /GRGTBAscratch_area
                                                                                                                          /GRGTBAscratch_area
                 OTFASSET TURNOVER
                                                                                                                          OTPASSET TURNOVER
                                                                                                                                                                                                                                   OTFASSET TURNOVER"
436
                                                                                                                         TSDecember through Movember
                                                                                                                                                                                                                                   TSJanuary through December
                 TSNovember through October
                 TiMonth
                                                                                                                          TiMonth
                                                                                                                                                                                                                                   TIMonth
```

I DECEMBER une DECEMBER

```
C
439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPercent"
                                                                                                                                      TTPercent*
                                                                                                                                                                                                                                                                                                                                                TYPercent"
                                                                                                                                       (BSC VQ
(BSC 2 VUPLOT)
                                                                                                                                                                                                                                                                                                                                                 (ESC | VQ
(ESC_2_VUPLOT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (ESC | VUPLOT)
View a plot for February throwlew a plot for March through

/BUscratch_area /BUscratch_area /RUscratch_area /RUscratch_area /RVjan_gross scratch_al2 /RVjan_gross scratch_a
                                 MONTE?
                                                                                                                                       TSFebruary through January
                                                                                                                                                                                                                                                                                                                                                 TSMarch through Pebruary TIMot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TSApril through March
                                                                                                                                         Timenth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tillooth
                                                                                                                                       TYPercent (BSC) VQ (BSC_2_VUPLOT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPercent {
BSC|VQ
{
ESC_2_VUPLOT}
                                                                                                                                                                                                                                                                                                                                                                                             /UPLOT}
                                                                                                                                     MONTES
                                                                                                                                                                                                                                                                                                                                                    AUG
 TAUG JUL
OTPGROSS MARGIN ON SALES'
TSAugust through July
TIMonth
                                                                                                                                                                                                                                                                                                                                                   TSSertember thro - August TIM-----
TTTM-----
TTPercent [ESC]YQ [BSC]Z_YUPLOT}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TSOctober through September
                                                                                                                                         TIMOBER
TYPErcent
{
ESC | ||
E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTPercent"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (BSC)VQ
(ESC_2_VUPLOT)
    494
495
                                 PEB JAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADT
                                                                                                                                          Peb
                                                                                                                                                                                                                                                                                                                                                    MAT
  496
497
498
499
500
501
502
503
505
                                   MAR PEB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EL7
                                                                                                                                          Har
                                                                                                                                                                                                                                                                                                                                                    164
                                   APR MAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Jub
                                                                                                                                                                                                                                                                                                                                                    147
                                                                                                                                          ADT
                                   MAT APR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Jul
                                                                                                                                          .
                                                                                                                                                                                                                                                                                                                                                     Jea
                                 JUN MAT
                                                                                                                                                                                                                                                                                                                                                    Jul
                                                                                                                                          jus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Aue
                                   JUL_JUN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sep
                                                                                                                                          Jul
                                                                                                                                                                                                                                                                                                                                                    Aug
    506
507
                              ANG_JUL
                                                                                                                                                                                                                                                                                                                                                       Sen
                                                                                                                                          Aug
  508
509 SBP AUG
                                                                                                                                                                                                                                                                                                                                                     0ct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mav
                                                                                                                                          Sep
                             OCT_SEP
                                                                                                                                                                                                                                                                                                                                                       May
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dec
```

```
TTPercent*
                                                                                                                                                                                                                                                                                                                                                      TTPercent*
  439 TYPercent
                        (BSC)VQ
(BSC_2_VUPLOT)
                                                                                                                                                                                         (BSC)VQ
(BSC_2_VUPLOT)
                                                                                                                                                                                                                                                                                                                                                        (BSC) VQ
(BSC_2_VUPLOT)
 441
442
443
444
445
                        View a plot for May through Apview a plot for June through Mview a plot for July through J
//RUscratch area //RUscratch area //RUscratch area //RUscratch area //RVian gross scratch all //RVeb gros
  448
 449
 450
451
  154
 455
 457
 461
                                                                                                                                                                                                                                                                                                                                                      TSJuly through June TIMonth
 462
                           TSMay through april
                                                                                                                                                                                         TSJune through May
 463
                          TIBeeth
                                                                                                                                                                                         Timonth
                                                                                                                                                                                         TYPercent*
(BSC)VQ
(BSC_2_VOPLOT)
                                                                                                                                                                                                                                                                                                                                                        TTPercent (BSC) VQ (ESC_2_VUPLOT)
                          Typercent*
{BSC|VG|
[ESC_2_VUPLCT]
 464
465
 466
 167
 468
 469
 470
                                                                                                                                                                                         MOV
                          View a plot for November throuview a plot for December throuview GRAPE FOR JANUARY THROUGH
                        View a plot for November to AUStratch area.

AVJan_gross scratch_a3

AVJan_gross scratch_a4

AVman_gross scratch_a5

AVman_gross scratch_a7

AVman_gross scratch_a7

AVman_gross scratch_a7

AVman_gross scratch_a9

AVman_gross scratch_a9

AVman_gross scratch_a1

AVman_gross scratch_a1

AVman_gross scratch_a1

AVman_gross scratch_a1

AVman_gross scratch_a1

AVman_gross scratch_a1

AVman_gross scratch_a2

AVman_gross scratch_a2
                                                                                                                                                                                      uview a plot for December 1
/RUScratch area
/RV jan gross scratch a2
/RV jan gross scratch a3
/RV jan gross scratch a4
/RV jan gross scratch a5
/RV jan gross scratch a6
/RV jan gross scratch a1
                                                                                                                                                                                                                                                                                                                                                   WIEW GRAPE POR JANUARY TE

/RUseratch area

/RVjan gross scratch al

/RVap gross scratch al

/RVap gross scratch al

/RVap gross scratch al

/RVay gross scratch al

/RVjul gross scratch al

/RVjul gross scratch al

/RVjul gross scratch al

/RVap gross scratch al

/RVec gross scratch all

/RVec gross scratch all
 483
 484
 485
                         INGV OCT OTFGROSS MARGIN ON SALBS
                                                                                                                                                                                       IDEC NOV"
OTPGROSS WARGIN ON SALES"
                                                                                                                                                                                                                                                                                                                                                      NJAN DEC"
OTPGROSS MARGIN ON SALES"
 48E
487
                                                                                                                                                                                         TSDecember through November
                           TSHovemper through October
                                                                                                                                                                                                                                                                                                                                                        TSJanuary through December
                           fillonth
                                                                                                                                                                                                                                                                                                                                                        Timonth
                                                                                                                                                                                        Timenth
                        TYPercent (ESC: V4 (ESC. 2 VUPLCT)
                                                                                                                                                                                         TPercert*
                                                                                                                                                                                                                                                                                                                                                        TPercent
 490
                                                                                                                                                                                          (BSC)VC
(BSC_2_VUPLCT)
                                                                                                                                                                                                                                                                                                                                                        (BSC)VQ
(BSC_2_VUPLOT)
 492
493
 494
 495
                         Hay
                                                                                                                                                                                         Jun
                                                                                                                                                                                                                                                                                                                                                        Jul
 496
497
                                                                                                                                                                                         Jul
                          Jun
                                                                                                                                                                                                                                                                                                                                                        Aug
 498
 493
                          Jul
                                                                                                                                                                                                                                                                                                                                                        Sep
                                                                                                                                                                                         Aug
 500
 501
                         AUE
                                                                                                                                                                                         Sep
                                                                                                                                                                                                                                                                                                                                                        Oct
 502
                         Sep
 503
                                                                                                                                                                                         Oct.
                                                                                                                                                                                                                                                                                                                                                        Hov
 504
505
                                                                                                                                                                                         I e v
                        0ct
                                                                                                                                                                                                                                                                                                                                                        Dec
 506
                         Nov
                                                                                                                                                                                         Dec
 507
                                                                                                                                                                                                                                                                                                                                                        Jan
 508
509
510
                                                                                                                                                                                                                                                                                                                                                        7eb
                           Dec
                                                                                                                                                                                         Jan
                       Jan
                                                                                                                                                                                         Feb
                                                                                                                                                                                                                                                                                                                                                        Bar
```

```
I
                                                                 J
                                                                         I
une
     DECEMBER
    Aug
                                 Sep
                                                              0ct
                                                                      Nov
                                                                      Dec
    Sep
                                 Oct
                                                              Nov
                                                                      Jan
                                 Hov
                                                              Dec
    0ct
    Nor
                                 Dec
                                                              Jan
                                                                      Pet
                                 Jan
                                                              Peb
                                                                      Ear
    Dec
                                 feb
                                                                      Apr
    Jan
                                                              Har
    Feb
                                 Har
                                                                      Hay
                                                              Apr
                                                                      Jun
                                                              tay
    Hat
                                 Apr
                                 Hay
                                                              Jun
                                                                      Jul
    Apr
```

1 0 P S Ū C390123345567890123345567850123345667850123345667850123345567850012334556789012334556789012334556789012334556789012334556785001233455678901233456789012334567890123345901233456789012334567890123345678901233456789012334567890123345901233456789012334567890123345678901233456789012334567890123345678901233456789012334567890123345678901233456789012334567890123345901233456789012334567890123345678901233456789012334567890123345901233456789012334567890123345678901233456789012334567890123345678901233456789012334567890123345678901233456789012334567890123345901233456789012345678901234567890123345678901234567800000000000000000000000000000000 L ľ Q Dec Jan Jan Peb Peb Ear **Ha**? Apr Apr Bay lay Jus Jea Jul Jul Aug Aug Sep

```
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       D
                                                                                                                                                                                                  B
MOV OCT
                                                                                                                   Bov
                                                                                                                                                                                                                                                                                              Dec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Jan
                             DEC_NOV
                                                                                                                                                                                                                                                                                              Jan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Peb
                                                                                                                  Dec
                           JAN DEC
                                                                                                                                                                                                                                                                                             feb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Har
                                                                                                                  Jan
                                                                                                               SAVE & REPLACE

Replace the file on disk with Save the current file in memorRxit SBDSS without saving chan [GOTO] blank area [GOTO] blank area [GOTO] plank area [GOTO] quit_msg [FS.78[GOTO] note [GOTO] note [GOTO] note corner [FRAMEOPP] [GOTO] no
                          PILE
                         \R
                                                                                                                   (BESTART)
                                                                                                                     {PRAMBOPP}
{GOTO}screen corner*
{GOTO}screen corner*
{MENUBRANCH EENU}
{ESC_Z_MENU}
                         RESTART
                           .
                           . . . . . .
                                                                                                                                                                      Welcome to the
                                                                                                                                                                      SMALL BUSINESS
                                                                                                                                                DECISION SUPPORT SYSTEM
                           * * *
                                                                                                                                                                             Version 1.0
                           :
```

A	5	Ç
acte		
*************		:::
:		i
ŧ	Your file has been saved.	i
1	You may now exit the system.	•
:		•
•		•
quit_ssf		
40.4000		
		::1
1		
•	Massicat	•
1	Any changes not maved will be	i
i	lost if you select 'Yes'.	i
•		
•		
•::::::::::		: 2 4
varning		
		::\$
1		
:	Varning!	i
•	You must update the data in all	•
•	subsequent souths to ensure	
•	data accuracy!	•
1		•
		::•

APPENDIX B

Appendix B contains the range names used in the SBDSS file. The range names were printed using Lotus 1-2-3's own printing function. They are displayed exactly as they appear in Spreadsheet D. Each range name is accompanied by its associated cell references and description. Due to the limitations of Lotus 1-2-3's printing function, some of the range name descriptions are truncated. This is indicated by a black dot at the right hand of the description. The complete description is visible in Spreadsheet D.

```
A:V1..A:AA304
A:Y140..A:Y140
 APRIL
                                                    Contains the financial statements for April.
 APR ACCTPAY
                                                    Balance of accounts payable for April.
Balance of accounts receivable for April.
 APR ACCTROVBL
                           A: Y122..A: Y122
APR ACCIRCUBLA
APR ADVERTISE
APR ASSET
APR BANE
APR BUILDING
APR CAPSTOCE
                           Ä: Y33..A: Y33
                                                    Advertising expenses for April.
                           A: 7291 . . A: 7291
                                                    The performance measure Asset Turnover Ratio for April.
                           A: Y121 . . A: Y121
                                                    Balance in bank accounts for April.
                          A: Y131. . A: Y131
A: Y147. . A: Y147
                                                    Original cost of buildings owned by end of April.
                                                    Original cost of capital stock owned at end of April.
APR CASH
APR CONSUMABLE
APR CUSTOMS
APR DATA
                                                    Cash on hand for April.
                           A: Y120 . . A: Y120
                          A: Y125 . . A: Y125
                                                    Original cost of consumable supplies on hand at end of April.
                          A: 718. . A: 718
A: V337. . A: V337
                                                    Customs expenses for April.
Copy of the data entry form for April.
APR DATBLINES
APR DVDS
APR BIHIBIT
APR FREIGHT
APR FURNITURE
                          A: 7344 . . A: 7417
                                                    The data inputted for April and located in APR DATA.
                          A: 266 . . A: 266
A: 734 . . A: 734
                                                    Dividends paid in April.
Exhibition expenses for April.
                          A: 719..A: 719
A: 7130..A: 7130
                                                    Preight expenses for April.
                                                    Original cost of office furniture owned at end of April.
APRIGROSS
APRINTAX
APRINTERBST
APRINTERP
                                                    The performance measure % Gross Margin on Sales for April.
                          A: 7293 . . A: 7293
                          A: AA50 . . A: AA50
                                                    Income tax expense for April.
                          A: Z11 . . A: Z11
                                                    Interest earned in April.
                                                    Interest expense in April.
                          A: 742 . . A: 742
 APR_INVENTORY
                          A: Z24 . . A: Z24
                                                    Bnd of the month inventory for April.
                                                   Proceeds from issuing capital stock in April.
Amount of long term debt at end of April.
Contains latels for Apr-Har plots.
APR_ISSCAPSTE
APR_LONGDEBT
                          A: Z248..A: Z248
A: Z145..A: Z145
APR MAR
APR MARGIN
APR MONTH
APR NOTESPAY
                          C:B499..C:N499
                          A: 7287 . . A: 7287
                                                    The performance measure Margin % for April.
                                                   Date used in heading of income statement for April.
Balance of notes payable for April.
Original cost of office equipment owned at end of April
                          A:X3..A:X3
                          A: Y142..A: Y142
APR OPFECUIP
APR OTHER
APR PREEXP
                          A: 7129 . . A: 7129
                          A: Y43..A: Y43
A: Y123..A: Y123
                                                    Other expenses not listed for April.
                                                    Balance of prepaid expenses for April.
 APR PURCHASES
                          A: Y17..A: Y17
                                                    Cost of purchases for inventory in April.
APR RETURN
APR SALARIES
APR SALES
APR SELLEXP
                          A: 7289 . . A: 7289
A: 739 . . A: 739
                                                    The performance measure Return on Capital for April.
                                                    Offices salaries paid in April.
Revenue from sales for April.
                          A:27..A:27
                          A: Z31 . . A: Z31
                                                    Expenses associated with selling for April.
APR SEMINARS
APR SHORTBORROW
                          A: 735 . . A: 735
A: Z247 . . A: Z247
                                                    Expenses associated with seminars for April.
                                                    Proceeds from short term borrowing in April.
APR SHORTDBBT
APR STAX
APR TAXPAY
APR TRAVEL
                          A: Z250 . . A: Z250
                                                    Payment made on short term debt for April.
                          A:28..A:28
A:Y141..A:Y141
                                                   Sales tax paid on inventory purchases for April.
Balance of income taxes payable for April.
                          A: 741 . . A: 741
                                                    Travel expenses for April.
 APR UTILITIES
                          A: 740 . . A: 740
                                                    Utilities expenses in April.
AUGUST
                          A: AX1 . . A: BC304
                                                    The financial statements for August.
AUG_ACCTPAY
                          A: BA140 . . A: BA140
                                                    Balance of accounts payable for August.
AUGTACCTREVBL
                          A:BA122..A:BA122
                                                    Balance of accounts receivable for August.
AUG_ADVERTISE
AUG_ASSET
                          A:BA33..A:BA33
A:BA291..A:BA291
                                                    Advertising expenses in August.
                                                   The performance measure Asset Turnover Ratio for August.
AUG_BANK
AUG_BUILDING
AUG_CAPSTOCK
AUG_CASH
AUG_CONSUMABLE
AUG_CUSTOMS
AUG_DATA
AUG_DATA
                          A:BA121..A:BA121
A:BA131..A:BA131
                                                   The bank balance for August.
Original cost of buildings owned at end August.
                          A:BA147 . . A:BA147
                                                   Original cost of capital stock owned by end of August.
The balance of cash on hand in August.
                          A: BA120 . . A: BA120
                          A: BA125 . . A: BA125
                                                   Original cost of consumable supplies on band at end of August.
                                                   Customs expenses in August.
Copy of the data entry form for August.
                          A:BA18..A:BA18
A:AX337..A:AX337
AUG DATBLNKS
AUG DVDS
AUG EXHIBIT
                          A:BA344..A:BA417
                                                   The data inputted for August located in AUG DATA.
                                                   Dividends paid in August.
Exhibition expenses for August
                          A: BB66 . . A: BB66
                          A: BA34 . . A: BA34
AUG PREIGHT
AUG PURNITURE
AUG GROSS
AUG INTAX
AUG INTEREST
AUG INTERP
                                                    Preight expenses for August.
                          A: BA19..A: BA19
                          A:BA130..A:BA130
                                                   Original cost of office furniture owned at end of August.
                          A:BA293..A:BA293
                                                    The performance measure % Gross Margin on Sales for August.
                          A:BC50..A:BC50
                                                    Income tax expense for August.
                          A:8811..A:8811
                                                    Interest earned in August.
                          A:BA42..A:BA42
                                                    Interest expense for August.
```

```
AUG_INVENTORY
                                  A:BB24..A:BB24
                                                                   Cost of the end of the month inventory for August.
AUG_ISSCAPSTE
AUG_ISSCAPSTE
AUG_JUL
AUG_LONGDBBT
AUG_MARGIN
AUG_NOTESPAY
AUG_ORPROUTE
                                                                  Proceeds for issuing capital stock in August. Contains labels for Aug-Jul plots. Amount of long term debt at end of August.
                                  A:BB248..A:BB248
C:B507..C:M507
                                  A: BB145 . . A: BB145
                                  A: BA287..A: BA287
                                                                   The performance measure Margin % for August.
                                                                  Date used in heading of Income statement.
Balance of notes payable for August.
                                  A: AZ3 . . A: AZ3
                                  A:BA142..A:BA142
AUG_OPPEQUIP
AUG_OTHER
AUG_PREEXP
                                                                  Original cost of office equipment owned at end of August. Other expenses not listed for August.
                                  A:BA129..A:BA129
                                  A: BA43..A: BA43
                                  A:BA123..A:BA123
A:BA17..A:BA17
                                                                   Balance of prepaid expenses for August.
AUG PREEDP
AUG PURCHASES
AUG RETURN
AUG SALARIES
AUG SALES
AUG SELLEXP
AUG SEMINARS
                                                                   Cost of purchases for inventory in August.
                                 A:BA289..A:BA289
A:BA39..A:BA39
                                                                   The performance measure Return on Capital for August.
                                                                   Office salaries paid in August.
                                  A:BB7..A:BB7
A:BB31..A:BB31
                                                                   Revenue from sales for August.
Expenses associated with selling for August.
Expenses associated with seminars for August.
                                  A:BA35..A:BA35
AUG_SHORTBORROW
                                  A:BB247..A:BB247
                                                                   Proceeds from short term borrowing in August.
AUG SHORTDBBT
AUG STAX
AUG TAXPAY
AUG TRAVBL
AUG UTILITIES
BANK BALANCB
                                                                   Payment made on short term debt for August.
                                  A:BB250..A:BB250
                                                                    Sales tax paid on inventory purchases in August.
                                  A:BB8..A:BB8
                                  A:BA141..A:BA141
                                                                  Balance of income taxes payable for August.
                                  A: BA41 . . A: BA41
                                                                   Expenses associated with travel in August.
                                  A:BA40..A:BA40
B:I52..B:I52
                                                                   Expenses for utilities in August.
Contains the formula used to determine the total bank balance on the
                                                                  Opening screen
Lower left corner of opening screen
                                  C: A543..C: D562
BANNER
BANNER CORNER
                                  C: 4562..C: 4562
BLANK AREA
                                  C: P29..C: P29
                                                                   Blank area on worksheet. Used when quitting program.
DATA_ENTRY
DATA_INPUT
DATBLNES
                                  B:A1..B:B94
                                                                   This is the data entry form in worksheet B.
                                  C:B28..C:B28
                                                                   MENU FOR DATA INPUT
                                                                   Column containing inputted data on data entry form. This is the first data element in the data entry form (Date).
                                  B: D8..B: D87
DATBLNES 1
                                  B:D8..B:D8
DATBLNES 10
DATBLNES 11
DATBLNES 12
                                  B: D26 . . B: D26
                                                                   Tenth data element in the data entry form (Advertising expenses).
                                                                   Bleventh data element in data entry form (Exhibition expenses). Twelveth data element in data entry form (Seminar expenses).
                                 B: D28..B: D28
                                  B: D30 . . B: D30
                                                                   Thirteenth data element in data entry form (Office salaries). Fourteenth data element in data entry form (Utility expenses). Fifteenth data element in data entry form (Travel expenses). Sixteenth data element in data entry form (Interest expenses).
DATBLNKS_13
                                  B: D32..B: D32
DATBLNES 14
DATBLNES 15
DATBLNES 16
                                  B: D34 . . B: D34
                                  B: D36 . . B: D36
                                  B: D38..B: D38
DATBLINES 17
DATBLINES 18
DATBLINES 19
DATBLINES 2
DATBLINES 2
DATBLINES 20
DATBLINES 21
                                 B: D40..B: D40
                                                                   Seventh data element in data entry form (Income tax expense).
                                                                   Bighteenth data element in data entry form (Other expenses). Wineteenth data element in data entry form (Dividends paid).
                                  B: D42..B: D42
                                  B: D44..B: D44
                                  B: D10..B: D10
                                                                   Second data element in data entry form (Sales).
                                 B: 046...0: 046
B: D52...b: D52
                                                                   Iwentieth data element in data entry form (Cash on hand).
                                                                    Twenty-first data element in data entry form (Bank account balance:
DATBLNES 22
                                  B:D55..B:D55
B:D57..B:D57
                                                                   Twenty-second data element in data entry form (Balance of accounts Twenty-third data element in data entry form (Prepaid expenses).
DATBLNES 23
DATBLNES 24
DATBLNES 25
                                                                   Twenty-fourth data element in data entry form (Cost fo consumable to Twenty-fifth data element in data entry form (Cost fo consumable to Twenty-sixth data element in data entry form (Cost of furniture owro-Twenty-seventh data element in data entry form (Cost of building). Twenty-eighth data element in data entry form (Balance of accounts Twenty-nineth data element in data entry form (Income taxes payable).
                                  B: D59..B: D59
                                  B:D61..B:D61
DATBLNES 26
DATBLNES 27
DATBLNES 28
DATBLNES 29
                                  B:D63..B:D63
                                  B:D65..B:D65
B:D67..B:D67
                                  B: D69..B: D69
DATBLMES 29
DATBLMES 3
DATBLMES 30
DATBLMES 31
DATBLMES 32
DATBLMES 33
DATBLMES 34
DATBLMES 35
                                  B: D12..B: D12
                                                                   Third data element in data entry form (Sales tax).
Thirtieth data element in data entry form (Notes payable)
                                  B: D76..B: D76
                                  B: D79..B: D79
                                                                   Thirty-first data element in data entry form (Long term debt).
                                  B: D81..B: D81
                                                                   Thirty-second data element in data entry form (Capital stock).
                                                                  Thirty-second data element in data entry form (Capital stock). Thirty-third data element in data entry form (Proceeds from short tenderty-fourth data element in data entry form (Proceeds from issuing Thirty-fifth data element in data entry form (Payments on short tenderty form). Fifth data element in data entry form (Purchases for inventory). Sixth data element in data entry form (Customs on purchases). Seventh data element in data entry form (Freight on purchases). Bighth data element in data entry form (Inventory, end of month). Mineth data element in data entry form (Selling expenses).
                                  B: D83 . . B: D83
                                  B: D85 . . B: D85
                                  B: D87..B: D87
DATBLHES_4
DATBLHES_5
                                  B: D14 . . B: D14
                                  B: D16..B: D16
                                  B:D18..B:D18
DATBLNES 6
DATBLNES 7
DATBLNES 8
                                  B: D20..B: D20
                                  B: D22..B: D22
B: D24..B: D24
DATBLNES 9
```

```
Contains the financial reports for December.
                         A:BZ1..A:CB304
DECEMBER
DEC_ACCTPAY
DEC_ACCTRCVBL
DEC_ADVERTISE
                         A:CC140..A:CC140
                                                  Balance of accounts payable for December.
                                                  Balance of accounts receivable for December.
                         A: CC122..A: CC122
                         A: CC33..A: CC33
                                                  Advertising expenses for December.
DEC_ASSET
DEC_BANK
                         A: CC291 . . A: CC291
                                                  The performance measure Asset Turnover Ratio for December.
                         A: CC121 . . A: CC121
                                                  Balance in bank accounts for December.
DEC_BUILDING
DEC_CAPSTOCE
DEC_CASH
DEC_CONSUNABLE
                         A:CC131..A:CC131
                                                  Original cost of buildings owned by end of December.
                                                 Original cost of capital stock owned by end of December. Balance of cash on hand for December.
                         A:CC147..A:CC147
                         A: CC120 . . A: CC120
                         A: CC125..A: CC125
                                                  Original cost of consumable supplies on hand at end of December.
DBC CUSTOMS
DBC DATA
DBC DATA
DBC DATBLNES
DBC DVDS
DBC EXHIBIT
                         A:CC18..A:CC18
A:BZ337..A:BZ337
                                                  Customs expenses for December.
Copy of the data entry form for December.
                                                  The data inputted for December and located in the data entry form.
                         A: CC344 . . A: CC417
                         A:CD66..A:CD66
A:CC34..A:CC34
                                                  Dividends paid in December.
                                                  Exhibition expenses for December.
DEC PREIGHT
                         A:CC19..A:CC19
                                                  Freight expenses for December.
DBC_FURNITURE
DBC_GROSS
DEC_INTAX
                         A:CC130..A:CC130
A:CC293..A:CC293
                                                  Original cost of office furniture owned at end of December.
                                                  The performance measure % Gross Margin on Sales for December.
                         A: CE50 . . A: CE50
                                                  Income tax expenses for December.
DECTINTEREST
DECTINTEXP
DECTINVENTORY
                         A: CD11..A: CD11
                                                  Interest earned in December.
                         A:CC42..A:CC42
                                                  Interest expenses in December.
                                                  Bnd of the month inventory for December.
Proceeds from issuing capital in December.
Amount of long term debt at end of December.
                         A: CD24 . . A: CD24
DEC INVENTORY
DEC ISSCAPSTE
DEC LONGDEBT
DEC MARGIN
DEC MONTH
DEC MOTESPAY
DEC OPPEQUIP
                         A:CD248..A:CD248
                         A:CD145..A:CD145
                         A:CC287..A:CC287
                                                  The performance measure Margin % for December
                         A:CB3..A:CB3
                                                  Date used in heading of income statement for December.
                         A:CC142..A:CC142
C:B515..C:M515
                                                  Balance of notes payable for December.
                                                 Contains labels for Dec-Nov plots.
Original cost of office equipment owned at end of December.
                         A:CC129 . . A:CC129
DEC_OTHER
DEC_PREEXP
DEC_PURCHASES
                         A: CC43. . A: CC43
                                                  Other expenses not listed for December.
                         A:CC123..A:CC123
A:CC17..A:CC17
                                                  Balance of prepaid expenses for December.
Cost of purchases for inventory in December.
DEC RETURN
DEC SALARIES
DEC SALES
DEC SELLEXP
                         A:CC289..A:CC289
                                                 The performance measure Return on Capital for December.
                         A:CC39..A:CC39
                                                  Offices salaries paid in December.
                         A:CD7..A:CD7
                                                  Revenue from sales for December.
                         A: CD31 . . A: CD31
                                                  Expenses associated with selling for December.
DEC_SEMINARS
DEC_SHORTBORROW
DEC_SHORTDBBT
DEC_STAX
DEC_TAXPAY
DEC_TRAVEL
                         A:CC35..A:CC35
A:CD247..A:CD247
                                                  Expenses associated with seminars for December.
                                                  Proceeds from short term borrowing in December.
                         A:CD250..A:CD250
                                                  Payment made on short term debt for December.
                                                  Sales tax paid on inventor; purchases in December.
Balance of income taxes payable for December.
                         A:CD8..A:CD8
                         A:CC141..A:CC141
                         A:CC41..A:CC41
                                                  Travel expenses for December.
DEC UTILITIES
                         A: CC40 . . 4 . CC40
                                                  Utilities expenses in December.
                         B:A1..B:E97
ENTRY_PORM
                                                  Names the entire Data Entry Form.
                        C:B36..C:B36
C:B22..C:B22
C:B273..C:B273
ESC2 DATA INPUT
BSC 7 MENU
                                                  Macro which allows user to escape back to Data_input menu from a si⊕
Macro which allows user to escape back to Main menu from a submenu.
BSC 2 PLOTS
BSC 2 PROPORTS
BSC 2 VUPLOT
PEDRUARY
                                                  Macro which lets user escape back to Plots menu from a submenu.
                                                  Macro which allows user to escape back to Reports menu from a submee
                         C:B243..C:B243
                         C: 8285 . . C: 8285
                                                  Allows user to escape back to Vuplot menu from a submenu.
                         A:81..A:8304
                                                  Contains the financial for February.
PEB_ACCTPAY
PEB_ACCTRCVBL
                         A: E140 . . A: E140
                                                  Balance of accounts payable for February
                         A: K122..A: K122
A: K33..A: K33
                                                  Balance of accounts receivable for February.
PEB ADVERTISE
                                                  Advertising expenses for February.
PEB_ASSET
PEB_BANE
PEB_BUILDING
                         A: K291 . . A: K291
                                                  The performance measure Asset Turnover Ratio for Pebruary.
                                                  Balance in bank accounts for Pebruary.
Original cost of buildings owned at end of Pebruary.
Original cost of capstock owned at end of Pebruary.
                         A: E121 . . A: E121
                         A: K131..A: K131
PEB BUILDING
PEB CAPSTOCE
PEBCASE
PEBCONSUMABLE
PEBCUSTOMS
PECDATA
PEBCATBLNES
PEBDVDS
PEBEBLEXHIBIT
                         A: K147 . . A: K147
                         A: £120 . . A: £120
                                                  Balance of cash on hand for Pebruary.
                         A: K125 . . A: K125
A: K18 . . A: K18
                                                  Original cost of consumable supplies on hand in February. Customs expenses for February.
                         A: 8337..A: 8337
                                                  Copy of the data entry form for Pebruary.
                         A: E344 . . A: E417
                                                  The data inputted for February and located in FBB_DATA.
                         A: L66..A: L66
                                                  Dividends paid in February.
                         A: $34 . . A: $34
                                                  Exhibition expenses for February.
```

```
PBB_PREIGHT
                            A: K19..A: K19
                                                      Preight expenses for February.
                           A: E130 . . A: E130
A: E293 . . A: E293
PBB PURNITURE
PEB GROSS
PBB INTAX
                                                      The original cost of office furniture owned at end of Pebruary.
                                                       The performance measure % Gross Margin on Sales for February.
                           A: M50 . . A: M50
                                                       Income tax expense for Pebruary.
PEB_INTEREST
PEB_INTEXP
PEB_INVENTORY
                            A: L11..A: L11
                                                       Interest earned in Pebruary
                           A: E42. . A: E42
                                                       Interest expense in Pebruary
                                                       End of the month inventory for February.
                           A: L24 . . A: L24
                           A:L248..A:L248
C:B495..C:M495
A:L145..A:L145
A:E287..A:E287
PEB_ISSCAPSTE
PEB_JAN
PBB_LONGDEBT
                                                      Proceeds from issuing capital stock in February.
Contains labels for Feb-Jan plots.
                                                       Amount of long term debt at end of Pebruary.
PEB_WARGIN
PEB_WONTH
PEB_NOTESPAY
PEB_OFFEQUIP
PEB_OTHER
PEB_PREEXP
                                                      The performance measure Margin % for February.
                           A: J3..A: J3
A: E142..A: E142
                                                      Date used in heading of income statement for February.
                                                      Balance of notes payable for February.
Original cost of office equipment owned at end of Pebruary.
Other expenses not listed for February.
                           A: K129..A: K129
A: K43..A: K43
A: K123..A: K123
A: K17..A: K17
                                                      Balance of prepaid expenses for February.
PBB PURCHASES
                                                      Cost of purchases for inventory in February
PBB_RBTURN
PEB_SALARIES
                           A: K289 . . A: K289
                                                      The performance measure Return on Capital for February.
                                                      Office salaries paid in February.
Revenue from sales for February.
                           A: $39..A: $39
PEB_SALES
FEB_SELLEXP
FEB_SEMINARS
PEB_SHORTBORROW
                           A: L7. . A: L7
                           A: L31 . . A: L31
                                                      Expenses associated with selling in February.
                           A: K35 . . A: K35
A: L247 . . A: L247
                                                      Expenses associated with seminars in February.
Proceeds from short term borrowing in February.
PBB SHORTDEBT
PBB STAX
PRB TAXPAY
PEB TRAVEL
                           A:L250..A:L250
                                                      Payment on short term debt in Pebruary.
                           A:L8..A:L8
A:E141..A:E141
                                                      Sales tax paid on inventory purchased in February.
                                                      Balance of taxes payable for February.
Travel expenses for February.
                           A: $41..A: $41
                           A: E40 . . A: E40
                                                      Utilities expenses for Pebruary.
MENU FOR SAVING PILES
PBB_UTILITIES
 FILE
                           C: B521..C: B521
JANUARY
                           A:A1..A:P304
                                                      Contains the financial reports for January.
JAN_ACCTPAY
JAN_ACCTRCVBL
JAN_ADVERTISE
                           A:D140..A:D140
                                                      Balance of accounts payable for January.
                           A:D122..A:D122
A:D33..A:D33
                                                      Balance of accounts receivable for January.
                                                       Advertising expenses for January.
JAN_ASSET
JAN_BANE
JAN_BUILDING
                           A: D291..A: D291
                                                      The performance measure Asset Turnover Ratio for January.
                           A: D121 . . A: D121
                                                      Balance in bank accounts for January.
                           A:D131..A:D131
A:D147..A:D147
                                                      Original cost of buildings owned at end of January.
Original cost of capital stock owned at end of January.
JAN_CAPSTOCE
JAN CASH
JAN CONSUMABLE
JAN CUSTOMS
JAN DATA
                           A: D120 . . A: D120
                                                      Balance of cash on hand for January.
                           A: D125 . . A: D125
                                                      Original cost of consumable supplies on hand in January.
                           A:D18..A:D18
A:A337..A:A337
                                                      Customs expenses for January.
Copy of the data entry form for January.
                           A: D344 . . A: D417
JAN_DATBLNES
                                                      The data inputted for January and located in JAN_DATA.
JAN DEC
JAN DVDS
                           C: B517..C: M517
                                                      Contains labels for Jan-Dec plots.
                           A: B66 . . A: B66
                                                      Dividends paid in January
 JAN EXBIBIT
                           A:D34..A:D34
                                                      Exhibition expenses for January.
JAN PREIGHT
JAN PURNITURE
                           A:D19..A:D19
A:D130..A:D130
                                                      Freight expenses for January.
The original cost of office furniture owned at end of January.
The performance measure % Gross Margin on Sales for January.
JAN GROSS
JAN INTAX
JAN INTEREST
JAN INTEXP
                           A: D293 . . A: D293
                           A: P50 . . A: P50
                                                      Income tax expense for January.
                           A:B11..A:B11
A:D42..A:D42
                                                      Interest earned in January.
Interest expense in January
JAN INVENTORY
JAN ISSCAPSTE
JAN LONGDEBT
JAN MARGIN
JAN MONTE
JAN MORESPAY
                           A: B24 . . A: B24
A: B248 . . A: B248
A: B145 . . A: B145
A: D287 . . A: D287
                                                      Bnd of the month inventory for January.
                                                      Proceeds from issuing capital stock in January.
Amount of long term debt at end of January.
                                                      The performance measure Margin % for January.
                           A:C3..A:C3
A:D142..A:D142
                                                      Date used in heading of income statement for January.
                                                      Balance of notes payable for January.
Original cost of office equipment owned at end of January.
Other expenses not listed for January.
JAN OPPEQUIP
JAN OTHER
JAN PREEIP
JAN PURCHASES
                           A: D129 . . A: D129
                           A: D43 . . A: D43
                           A:D123..A:D123
A:D17..A:D17
                                                       Balance of prepaid expenses for January
                                                      Cost of purchases for inventory in January.
JAN RETURN
JAN SALARIES
JAN SALES
                           A:D289..A:D289
A:D39..A:D39
                                                      The performance measure Return on Capital for January.
                                                      Office salaries paid in January.
                           A: 87 . . A: B7
                                                      Revenue from sales for January.
```

```
JAN_SBLLEXP
JAN_SBEINARS
                          A:B31..A:B31
A:D35..A:D35
                                                    Expenses associated with selling in January.
                                                    Expenses associated with seminars in January.
 JAN SHORTBORROW
                          A: B247. . A: B247
                                                    Proceeds from short term borrowing in January.
                          A: B250 . . A: B250
 JAN_SHORTDEBT
                                                    Payment made on short term debt in January.
JAN STAX
JAN TAXPAY
JAN TRAVEL
JAN UTILITIES
JULY
                          A: E8 . . A: E8
                                                    Sales tax paid on inventory purchased in January.
                          A: D141..A: D141
                                                    Balance of taxes payable for January.
                                                    Travel expenses for January.
                          A: D41 . . A: D41
                          A: D40..A: D40
                                                   Utilities expenses for January.
                          A:AQ1..A:AV304
A:AT140..A:AT140
                                                   Contains the financial reports for July.
JUL ACCTPAY
JUL ACCTROVBL
JUL ADVERTISE
                                                   Balance of accounts payable for July.
                          A:AT122..A:AT122
A:AT33..A:AT33
                                                   Balance of accounts receivable for July.
                                                    Advertising expenses for July.
JUL ASSET
JUL BANK
JUL BUILDING
                                                   The performance measure Asset Turnover Ratio for July.
                          A: AT291 . . A: AT291
                                                   Balance in bank accounts for July.
Original cost of buildings owned at end of July.
Original cost of capital stock owned at end of July.
                          A:AT121..A:AT121
A:AT131..A:AT131
JUL CAPSTOCE
JUL CASH
JUL CONSUMABLE
                          A:AT147..A:AT147
                                                   Balance of cash on hand for July.
Original cost of consumable supplies on hand in July.
                          A:AT120..A:AT120
                          A: AT125 . . A: AT125
JUL_CUSTONS
JUL_DATA
JUL_DATBLNES
JUL_DVDS
JUL_BIHIBIT
JUL_FREIGBT
JUL_GRASS
                                                   Customs expenses for July.
Copy of the data entry form for July.
                          A:AT18..A:AT18
A:AQ337..A:AQ337
                                                   The data inputted for July and located in JUL_DATA
                          A: AT344 . . A: AT417
                          A: AU66 . . A: AU66
                                                   Dividends paid in July.
                          A: AT34 . . A: AT34
                                                    Exhibition expenses for July.
                          A:AT19..A:AT19
                                                    Preight expenses for July.
                          A:AT130 . . A:AT130
                                                   Original cost of office furniture owned at end of July.
JUL FURNITURE
JUL GROSS
JUL INTEREST
JUL INTEREST
JUL INTERP
JUL HARGIN
JUL MOTESPAY
JUL OPPRGUIP
                          A: AT293 . . A: AT293
                                                   The performance measure % Gross Margin on Sales for July.
                          A: AV50 . . A: AV50
                                                    Income tax expense for July.
                          A: AU11..A: AU11
                                                    Interest earned in July.
                          A: A742. . A: A742
                                                    Interest expense in July.
                          A: AU24 . . A: AU24
                                                    Bnd of the month inventory for July.
                          A:AU248..A:AU248
                                                   Proceeds from issuing capital stock in July. Contains labels for Jul-Jun plots.
                          C: B505 . . C: M505
                          A: AU145..A: AU145
                                                   Amount of long term debt at end of July.
                                                   The performance measure Margin % for July.
Date used in heading of income statement for July.
                          A:AT287..A:AT287
                          A:AS3..A:AS3
                                                   Balance of notes payable for July.
Original cost of office equipment owned at end of July.
Other expenses not listed for July.
                          A:AT142..A:AT142
JUL OFFECUIP
JUL OTHER
JUL PREEXP
                          A:AT129..A:AT129
A:AT43..A:AT43
                          A: AT123 . . A: AT123
                                                   Balance of prepaid expenses for July
JUL PURCHASES
JUL RETURN
JUL SALARIES
                          A:AT17..A:AT17
                                                   Cost of purchases for inventory in July.
                                                   The performance measure Return on Capital for July. Office salaries paid in July.
                          A:AT289..A:AT289
                          A:AT39..A:AT39
JUL SALES
JUL SELLEXP
JUL SEMINARS
JUL SHORTBORROW
                          A:AU7..A:AU7
                                                    Revenue from sales for July.
                                                    Expenses associated with selling in July.
                          A: AU31 . . A: AU31
                          A: AT35 . . A: AT35
                                                   Expenses associated with seminars in July. Proceeds from short term borrowing in July.
                          A: AU247..A: AU247
JUL SHORTDEBT
JUL STAX
JUL TAIPAY
JUL TRAVEL
JUL UTILITIES
JUNE
                          A:AU250..A:AU250
                                                   Payment made on short term debt in July.
                                                   Sales tex on inventory purchased in July. Balance of taxes payable for July.
                          A: AU8..A: AU8
                          A:AT141..A:AT141
                          A:AT41..A:AT41
                                                    Travel expenses for July.
                          A:AT40..A:AT40
                                                    Utilities expenses for July
                                                    Contains the financial reports for June.
                          A:AJI..A:A0304
JUN ACCTPAY
JUN ACCTRCVBL
JUN ADVBRTISE
JUN ASSET
                          A:AN140..A:AN140
                                                   Balance of accounts payable for June.
                                                   Balance of accounts receivable for June.
                          A: AM122..A: AM122
                          A:AM33..A:AM33
                                                    Advertising expenses for June.
                          A: AM291 . . A: AM291
                                                   The performance measure Asset Turnover Ratio for June.
                                                   Balance in bank accounts for June.
Original cost of buildings owned at end of June.
Original cost of capital stock owned by end of June.
JUN BANK
JUN BUILDING
JUN CAPSTOCK
                          A:AM121..A:AM121
                          A: AM131..A: AM131
                          A:AB147..A:AB147
 JUN CASE
                          A:AM120..A:AM120
                                                   balance of cash on hand for June.
JUN-CONSUMABLE
JUN-CUSTONS
JUN-DATA
                                                   Original cost of consumable supplies on hand in June.
                          A:AM125..A:AM125
                                                   Customs expenses for June.
Copy of the data entry form for June.
                          A:AN18, A:AN18
A:AJ337..A:AJ337
                          A:AM344..A:AM417 The data inputted for June and located in JUN_DATA.
 JUN DATELNES
```

```
JUN_DVDS
JUN_BXHIBIT
                        A: AN66 . . A: AN66
                                                 Dividends paid in June.
                        A:AH34..A:AH34
                                                 Exhibition expenses for June.
JUN PREIGHT
                        A: AB19 . . A: AH19
                                                 Preight expenses for June.
JUN PURNITURE
                        A:AM130..A:AM130
                                                 Original cost of office furniture owned at end of June.
JUN GROSS
JUN INTAX
                        A: AM293 . . A: AM293
                                                 The performance measure % Gross Margin on Sales for June.
                        A:A050..A:A050
                                                 income tax expense for June.
JUN-INTEREST
JUN-INTERP
JUN-INVENTORY
                        A:AN11..A:AN11
                                                 Interest earned in June.
                                                 Interest expense in June.
                        A: AM42 . . A: AM42
                        A:AN24..A:AN24
                                                 Bnd of the month inventory for June.
                        A: AN248 . . A: AN248
                                                Proceeds from issuing capital stock in June.
JUN ISSCAPSTE
JUN_LONGDEBT
                        A:AN145..A:AN145
                                                 Amount of long term debt at end of June.
JUN MARGIN
JUN MAY
                                                The performance measure Hargin % for June. Contains labels for Jun-Hay plots.
                        A: AH287 . . A: AH287
                        C: B503..C: M503
JUNTHONTH
JUNTHOTESPAY
                        A:AL3..A:AL3
A:AH142..A:AH142
                                                Date used in heading of income statement for June.
Balance of notes payable for June.
Original cost of office equipment owned at end of June.
JUN OPFEQUIP
                        A: AM129 . . A: AM129
JUN-OTEBR
JUN-PREEXP
JUN-PURCHASES
                        A: AM43 . . A: AM43
                                                 Other expenses not listed for June.
                        A:AM123..A:AM123
A:AM17..A:AM17
                                                 Balance of prepaid expenses for June.
                                                 Cost of purchases for inventory in June.
                        A:AH289..A:AH289
JUN RBTURN
                                                The performance measure Return on Capital for June.
                        A:AM39..A:AM39
A:AN7..A:AN7
JUN SALARIBS
JUN SALES
                                                 Office salaries paid in June.
                                                 Revenue from sales for June.
Expenses associated with selling in June.
JUN SELLEXP
                        A: AN31 . . A: AN31
JUN SEMINARS
JUN SHORTBOREOW
JUN SHORTDEBT
                                                 Expenses associated with seminars in June. Proceeds from short term borrowing in June.
                        A:AM35..A:AM35
A:AM247..A:AM247
                        A:AN250..A:AN250
                                                 Payment made on short term debt in June.
JUN STAX
JUN TAXPAY
JUN TRAVEL
                        A:AN8..A:AN8
                                                 Sales tax on inventory purchased in June.
                        A:AM141..A:AM141
A:AM41..A:AM41
                                                Balance of taxes payable for June.
                                                Travel expenses for June.
Utilities expenses for June.
JUN UTILITIES
                        A:AH40..A:AH40
                                                 Macro which starts the application.
MAIN
                        C: B8..C: B8
MARCH
                        A:01..A:T304
                                                 Contains the financial reports for March.
                        A:R140..A:R140
MAR_ACCTPAY
                                                 Balance of accounts payable for March.
MAR_ACCTRCVBL
MAR_ADVERTISE
                        A:R122..A:R122
                                                 Balance of accounts receivable for March.
                        A:R33..A:R33
                                                 Advertising expenses for March.
WAR ASSET
WAR BANK
                        A: R291 . . A: R291
                                                 The performance ratio Asset Turnover Ratio for March.
                        A: K121 . . A: R121
                                                 Balance in bank accounts for March.
MAR_BUILDING
MAR_CAPSTOCE
MAR_CASH
                        A:R131..A:R131
A:R147..A:R147
                                                Original cost of buildings owned at end of March.
Original cost of capital stock owned at end of March.
Balance of cash on hand for March.
                        A:R120 . A:R120
MARICONSUMABLE
MARICUSTONS
                        A:R125..A:R125
                                                 Original cost of consumable supplies on hand in March.
                                                Customs expense for March.
Copy of the data entry form for March.
                        A:R18..A:R18
A:0337..A:0337
MAR DATA
MAR_DATBLNES
MAR_DVDS
MAR_EXHIBIT
                        A R344 . . A: R417
                                                 The data inputted for March and located in MAR DATA.
                        A: S66 . . A: S66
                                                 Dividends paid in March.
                        A:R34..A:R34
                                                 Exhibition expenses for March. Contains labels for Mar-Feb plots.
MARTPEE
                        C:8497..C:M497
MAR PREIGHT
MAR PURNITURE
                        A:R19..A:R19
                                                 Preight expenses for March.
                        A: R130 . . A: R130
                                                 Original cost of office furniture owned at end of Barch.
                                                 The performance measure % Gross Margin on Sales for March.
MARTGROSS
                        A: R293..A: R293
MARTINTAX
MARTINTERBST
MARTINTEXP
                        A:T50..A:T50
                                                 Income tax expense for March.
                        A:S11..A:S11
                                                 Interest earned in March.
                        A:R42..A:R42
                                                 Interest expense in March.
MAR_INVENTORY
MAR_ISSCAPSTE
                                                 Bnd of the month inventory for March.
                        A: S24 . . A: S24
                                                Proceeds from issuing capital stock in March.
Amount of long term debt at end of March.
The performance measure Margin % for March.
                        A: S248 . . A: S248
WAR_LONGDEBT
                        A: $145 . . A: $145
                        A: R287 . . A: R287
MAR_MONTH
MAR_NOTESPAY
                        A:Q3..A:Q3
A:R142..A:R142
                                                 Date used in heading of income statement for March.
                                                Balance of notes payable for March.
Original cost of office equipment owned at end of March.
MAR OFFEQUIP
                        A:R129..A:R129
MAR OTBER
                        A: R43..A: R43
                                                 Other expenses not listed for March.
MAR_PREEXP
MAR_PURCHASES
                        A:R123..A:R123
A:R17..A:R17
                                                 Balance of prepaid expenses for March.
Cost of purchases for inventory in March.
MAR RETURN
                        A: R289 . . A: R289
                                                 The performance measure Return on Capital for March.
```

```
MAR_SALARIBS
MAR_SALBS
MAR_SBLLEIP
                                                      Office salaries paid in March.
                           A:R39..A:R39
                           A:S7..A:S7
                                                      Revenue from sales for March.
                           A: $31 . . A: $31
                                                      Expenses associated with selling in March.
MAR_SELLET
MAR_SENINARS
MAR_SHORTDEBT
MAR_SHORTDEBT
MAR_STAI
MAR_TAIPAY
MAR_TRAVEL
MAR_UTILITIES
                           A: R35..A: R35
                                                      Expenses associated with seminars in March.
                           A: S247 . . A: S247
                                                      Proceeds from short term borrowing in March.
                           A: $250 . . A: $250
                                                      Payment made on short term det in March.
                                                     Sales tax paid on inventory purchased in March.
Balance of taxes payable for March.
Travel expenses for March.
                           A:S8..A:S8
                           A:R141..A:R141
                           A: R41..A: R41
                           A:R40..A:R40
                                                      Utilities expenses for March.
                           A:AC1..A:AB331
A:AF140..A:AF140
MAY
                                                      Contains the financial reports for May.
MAY_ACCTPAY
                                                     Balance of accounts payable for May.
Balance of accounts receivable for May.
MAY ACCTROVEL
MAY ACCTROVEL
MAY ADVERTISE
MAY AFR
MAY ASSET
MAY BANK
MAY BUILDING
                           A: AP122..A: AP122
                           A: AP33 . . A: AP33
C: B501 . . C: M501
                                                     Advertising expenses for May.
Contains labels for May-Apr plots.
The performance measure Asset Turnover Ratio for May.
                           A: AP291 . . A: AP291
                                                     Balance in banks for May.
Original cost of buildings owned at end of May
                           A: AP121 . . A: AP121
                           A: AP131 . . A: AP131
                           A: AP147 . . A: AP147
MAY_CAPSTOCE
                                                      Original cost of capital stock owned by end of May.
MAY CASE
MAY CONSUMABLE
                           A: AP120 . . A: AP120
                                                      Balance of cash on hand for May.
                           A: AF125 . . A: AF125
                                                      Original cost of consumable supplies on hand in May.
MAY_CUSTOMS
                           A:AF18..A:AF18
                                                      Customs expenses for May.
MAY DATA
MAY DATBLNES
MAY DVDS
                           A: AC337 . . A: AC337
                                                      Copy of the data entry form for May
                           A: AP344 . . A: AP417
                                                      The data inputted for May and located in MAY DATA.
                           A: AG66 . . A: AG66
                                                      Dividends paid in Way.
MAY EXHIBIT
MAY PREIGHT
MAY PURNITURE
                           A:AP34 . . A: AP34
                                                      Exhibition expenses for May.
                           A:AF19..A:AF19
A:AF130..A:AF130
                                                     Preight expenses for May.
Original cost of office furniture owned at end of May.
MAY GROSS
MAY INTAX
MAY INTEREST
MAY INTEREST
MAY INTEREST
MAY INVENTORY
MAY ISSCAPSTE
MAY LONGEBT
                           A:AP293..A:AP293
                                                     The performance measure % Gross Margin on Sales for May.
                           A:AH50..A:AH50
                                                      Income tax expense for May.
                           A: AG11..A: AG11
                                                      Interest earned in May.
                           A: AP42..A: AP42
                                                      Interest expense in May.
                          A: AG24..A: AG24
A: AG248..A: AG248
A: AG145..A: AG145
                                                      Bnd of the month inventory for May.
                                                     Proceeds from issuing capital stock in May.
Amount of long term debt at end of May.
MAY MARGIN
MAY NONTH
MAY NOTESPAY
                                                     The performance measure Margin % for May.
Date used in heading of income statement for May.
Balance of notes payable for May.
Original cost of office equipment owned at end of May.
                           A: AP287 . . A: AP287
                           A:AE3..A:AE3
A:AF142..A:AF142
MAY OFFEQUIP
MAY OFFER
MAY PREEXP
MAY PURCHASES
MAY RETURN
MAY SALARIES
                           A:AF129..A:AF129
                           A:AP43..A:AP43
                                                      Other expenses not listed for May.
                           A: AP123..A: AP123
A: AP17..A: AP17
                                                      Balance of prepaid expenses for May
                                                      Cost of purchases for inventory in May
                           A:AF289..A:AF289
A:AF39..A:AF39
                                                     The performance measure Return on Capital for May.
                                                     Office salaries paid in May. Revenue from sales for May.
MAY SALES
MAY SELLEXP
MAY SELLEXP
MAY SENINARS
MAY SHORTBORROW
                           A: AG7 . . A: AG7
                           A: AG31 . . A: AG31
                                                      Expenses associated with selling in May.
                           A: AP35 . . A: AP35
A: AG247 . . A: AG247
                                                     Expenses associated with seminars in May. Proceeds from short term borrowing in May.
MAY SHORTDEBT
MAY STAX
MAY TAXPAY
MAY TRAVEL
MAY UTILITIES
MENU
                           A: AG250 . . A: AG250
                                                      Payment made on short term debt in May.
                                                     Sales tax on inventory purchased in May.
Balance of taxes payable for May.
                           A:AG8..A:AG8
A:AP141..A:AP141
                           A: AF41..A: AF41
                                                      Travel expenses for May.
                           A:AP40..A:AP40
C:B17..C:B17
                                                      Utilities expenses for May.
PRIMARY MENU
MONTE
                           C:B294..C:B294
                                                      Menu for selecting plots of the margin percentage ending in Jan - .
                           C: B318..C: B318
MONTH2
                                                      Menu for selecting plot of margin percentage ending in Jul- Dec.
                                                      Menu for selecting plot of return on capital ending in Jan-Jun.
Menu for selecting a plot of return on capital ending in Jul-Dec.
MONTH3
                           C: B368..C: B368
NONTE4
MONTH5
                           C:B393..C:B393
                                                      Menu for selecting a plot of asset turnover ratio ending in Jan-Ju.
                                                      Menu for selecting a plot of asset turnover ratio ending in Jul-De.
Menu for selecting a plot of % gross margin on sales for Jan-Jun.
MONTH6
                           C:B419..C:B419
MONTH?
                           C:B444..C:B444
                           C:B470..C:B470
C:A590..C:D609
B:I76..B:I76
                                                      Menu for selecting a plot of % gross margin on sale for Jul-Dec.
MONTH8
 NOTE
                                                      Contains screen telling user that data has been successfully saved.
 NOTES PAYABLE
                                                      Contains the formula for determining total notes payable in the da-
```

```
NOTE CORNER
NOVEMBER
                        C:A609..C:A609
                                                Lower left hand corner of NOTE.
                                                Contains the financial reports for November.
                        A:BS1..A:BX304
NOV_ACCTPAY
NOV_ACCTRCVBL
NOV_ADVERTISE
                         A: BV140 . . A: BV140
                                                Balance of accounts payable for November.
                         A: BV122..A: BV122
                                                Balance of accounts receivable for November.
                        A: BV33..A: BV33
                                                 Advertising expenses for November.
                        A:BV291..A:BV291
A:BV121..A:BV121
A:BV131..A:BV131
NOV_ASSET
NOV_BANK
NOV_BUILDING
                                                The performance measure Asset Turnover Ratio for November.
                                                Balance in bank accounts for November.
                                                Original of cost of buildings owned at end of November.
Original cost of capital stock owned by end of November.
NOV BUILDING
NOV-CAPSTOCK
NOV-CASH
NOV-CONSUMABLE
NOV-CUSTOMS
NOV-DATA
NOV-DATBLNKS
NOV-DATBLNKS
NOV-EXHIBIT
                         A:BV147..A:BV147
                        A: BV120..A: BV120
A: BV125..A: BV125
                                                Balance of cash on hand for Movember.
Original cost of consumable supplies on hand in November.
                        A:BV18..A:BV18
A:BS337..A:BS337
                                                Customs expenses for November.
                                                Copy of the data entry form for November.
                        A: BV344..A: BV417
A: BW66..A: BW66
                                                The inputted for November and located in NOV_DATA. Dividends paid in November.
                        A:BV34..A:BV34
A:BV19..A:BV19
                                                Exhibition expenses for November.
NOV PREIGHT
                                                Freight expenses for November.
NOV PURNITURE
                        A:BV130..A:BV130
                                                Original cost of office furniture owned at end of Movember.
NOV GROSS
NOV INTAX
NOV INTEREST
                         A: BV293 . . A: BV293
                                                The performance measure % Gross Margin on Sales for November.
                        A: BX50..A: BX50
                                                 Income tax expense for November.
                        A: BW11..A: BW11
                                                 Interest earned in November.
NOV INTEXT
NOV INVENTORY
NOV ISSCAPSTE
NOV LONGOEBT
                        A: BV42..A: BV42
                                                 Interest expense in November.
                        A: BW24 . . A: BW24
                                                 Bnd of the month inventory for November.
                        A:BW248..A:BW248
A:BW145..A:BW145
A:BV287..A:BV287
                                                Proceeds from issuing capital stock in November.
                                                 Amount of ions term debt at end of November.
NOV WARGIN
                                                The performance measure Margin % for November. Date used in heading of income statement for November.
                        A:BU3..A:BU3
                        A:BV142..A:BV142
C:B513..C:M513
                                                Balance of notes payable for Movember. Contains labels for Nov-Oct plots.
NOV NOTESPAY
NOV_OFFEQUIP
                        A: BV129 . . A: BV129
                                                Original cost of office equipment owned at end of November.
NOV-OTHER
                        A:BV43..A:BV43
                                                Other expenses not listed for November.
NOV_PREEXP
NOV_PURCHASES
                        A: BV123 . . A: BV123
                                                Balance of prepaid expenses for November
                        A: BV17..A: BV17
                                                 Cost of purchases for inventory in November.
NOV RETURN
                        A:BV289..A:BV289
                                                The performance measure Return on Capital for November.
NOV SALARIBS
                         A:BV39..A:BV39
                                                Office salaries paid in November.
NOV_SALBATIBS
NOV_SALBS
NOV_SELLEXP
NOV_SBMINARS
NOV_SHORTBORROW
NOV_SHORTBORROW
NOV_STAX
NOV_TAXPAY
                        A:BW7..A:BW7
A:BW31..A:BW31
                                                 Revenue from sales for November.
                                                 Expenses associated with selling in November.
                        A:BV35..A:BV35
A:BW247..A:BW247
                                                Expenses associated with seminars in November.
                                                Proceeds from short term borrowing in November.
                        A:BW250..A:BW250
                                                Payment made on short term debt in November.
                        A: BW8 . . A: BW8
                                                 Sales tax paid on inventory purched in November.
                        A: BV141..A: BV141
                                                Balance of taxes payable for November.
Travel expenses for November.
NOV_TRAVEL
NOV_UTILITIES
                        A: BV41..A: BV41
                        A:BV40..A:BV40
                                                Utilities expenses for November
OCTOBER
                        A:BL1..A:BQ304
                                                Contains the financial reports for October.
OCT_ACCTPAY
OCT_ACCTRCVBL
                        A: B0140 . . A: B0140
                                                Balance of accounts payable for October.
Balance of accounts receivable for October.
                        A:B0122..A:B0122
                        A:B033..A:B033
OCT_ADVERTISE
                                                Advertising expenses for October.
OCT ADVERTISE
OCT ASSET
OCT BANK
OCT BUILDING
OCT CAPSTOCK
OCT CASH
OCT CONSUMABLE
OCT CUSTOMS
                         A: B0291 . . A: B0291
                                                The performance measure Asset Turnover Ratio for October.
                        A: B0121 . . A: B0121
                                                Balance in bank accounts for October.
Original cost of buildings owned at end of October.
                         A:B0131..A:B0131
                        A: B0147..A: B0147
                                                Original cost of capital stock owned at end of October.
                        A:B0120..A:B0120
A:B0125..A:B0125
                                                Balance of cash on hand for October.
                                                Original cost of consumable supplies on hand in October. Customs expenses for October.
                        A:B018..A:B018
OCT_DATA
OCT_DATBLNES
OCT_DVDS
                         A:BL337..A:BL337
                                                Copy of the data entry form for October.
                         A: B0344..A: B0417
                                                The data inputted for October and located in OCT_DATA.
                         A: BP66..A: BP66
                                                 Dividends paid in October
OCT FREIGHT
OCT FURNITURE
                         A: B034 . . A: B034
                                                 Bubibition expenses for October.
                        A:B019..A:B019
A:B0130..A:B0130
                                                Freight expenses for October.
Original cost of office furniture owned at end of October.
OCT_GROSS
OCT_INTAX
OCT_INTBREST
                        A: B0293..A: B0293
                                                The performance measure % Gross Margin on Sales for October.
                        A: BQ50 . . A: BQ50
                                                 Income tax expense for October.
                        A: BP11 . . A: BP11
                                                 Interest earned in October.
```

```
OCT_INTRXP
                             A:B042..A:B042
                                                           Interest expense in October.
 OCT_INVENTORY
                             A: BP24 . . A: BP24
                                                           Bnd of the month inventory for October.
OCT INVENTORY
OCT ISSCAPSTE
OCT LONGDEBT
OCT MARGIN
OCT MONTH
OCT NOTESPAY
OCT OPPROUIP
                                                          Proceeds from issuing capital stock in October.
Amount of long term debt at end of October.
                             A: BP248..A: BP248
                             A: BP145..A: BP145
                                                          The performance measure Margin % for October. Date used in heading of income statement for October.
                             A: B0287 . . A: B0287
                             A: BN3., A: BN3
                                                          Balance of notes payable for October.
Original cost of office equipment owned at end of October.
Other expenses not list for October.
                             A: B0142..A: B0142
                             A:B0129..A:B0129
OCT_OTHER
OCT_PREEXP
OCT_PURCHASES
                             A: B043 . . A: B043
                             A:B0123..A:B0123
A:B017..A:B017
                                                          Balance of prepaid expenses for October.
Cost of purchases for inventory in October.
OCT RETURN
OCT SALARIBS
OCT SALARIBS
OCT SELLEIP
OCT SENINARS
                             A: B0289 . . A: B0289
                                                          The performance measure Return on Capital for October.
                                                          Office salaries paid in October.
Revenue from sales for October.
Expenses associated with selling in October.
                             A:B039..A:B039
                             A:BP7..A:BP7
A:BP31..A:BP31
A:B035..A:B035
                                                          Expenses associated with seminars in October.
OCT SERINARS
OCT SEP
OCT SHORTBORDOW
OCT SHORTDEBT
OCT STAX
OCT TAXPAY
OCT TRAVEL
OCT UTILITIES
BLATE DATA
                             C: B511..C: M511
A: BP247..A: BP247
                                                          Contains labels for Oct-Sep plots.
                                                          Proceeds from short term borrowing in October.
                             A:BP250 . . A:BP250
                                                          Payment made on short term debt in October.
                             A:BP8..A:BP8
                                                          Sales tax paid on inventory purchased in October.
                                                          Balance of taxes payable for October.
                             A:B0141..A:B0141
                             A:B041..A:B041
                                                          Travel expenses for October.
                             A: B040., A: B040
                                                          Utilities expenses for October.
PLACE_DATAI
                             C: B12..C: G12
                                                          Menu for copying data from data entry form to financial reports fo.
                                                          Menu for copying data from data entry form to financial reports for Menu for selecting which performance measure to plot.
 PLACE_DATA2
                             C: B86 . . C: G86
PLOTS
                             C:B268..C:B268
                                                          Menu for printing financial reports for Jan-Jun.

Henu for printing reports for Jul-Dec.

Lower left hand corner of QUIT_MSG.

Screen which warns user of dangers of quitting.

Henu for selecting whether to view or print financial reports.

Hacro which is used to restart the application after leaving macro.
PRINT_REPORTS1
PRINT_REPORTS2
QUIT_CORNER
QUIT_NSG
                             C: B258..C: B258
                             C:B263..C:B263
C:A633..C:A633
                             C: A614..C: D633
REPORTS
                             C: B238..C: B238
                             C:B534..C:B534
 RESTART
                                                          First cell in range SCRATCH ARBA.
Tenth cell in range SCRATCH ARBA.
Bleventh cell in range SCRATCH ARBA.
Twelveth cell in range SCRATCH ARBA.
SCRATCH_A1
                             C:B291..C:B291
C:K291..C:K291
SCRATCH_A10
SCRATCH_All
SCRATCE_Al2
                             C: L291 . . C: L291
                             C:M291..C:M291
                                                          Second cell in range SCRATCH ARBA.
Third cell in range SCRATCH ARBA.
 SCRATCH A2
                             C: C291 . . C: C291
SCRATCH_A3
                             C: D291..C: D291
                                                          Fourth cell in range SCRATCH ARBA. Fifth cell in range SCRATCH ARBA.
SCRATCH A4
                             C: E291..C: E291
                             C: P291..C: P291
SCRATCH A5
SCRATCH A6
SCRATCH A7
                             C: G291 . . C: G291
                                                          Sixth cell in range SCRATCH ARBA.
Seventh cell in range SCRATCH ARBA
                             C: #291..C: #291
                                                          Bighth cell in range SCRATCH_ARBA.
 SCRATCH A8
                             C: 1291 . . C: 1291
SCRATCH_A9
                             C:J291..C:J291
                                                          Nineth cell in range SCRATCH_AREA.
                             C:B291..C:M291
C:P1..C:P1
 SCRATCH_AREA
                                                          Used for arranging data in appropriate order for plotting. Screen used after opening screen.
SCREEN
                                                          Lower left corner of the range screen.
Contains the financial reports for September.
 SCREEN CORNER
                             C: P20..C: P20
SEPTEMBER
                             A:BE1..A:BJ304
                                                          Balance of accounts payable for September.
Balance of accounts receivable for September.
SEP ACCTPAY
SEP ACCTRCVBL
                              A:BB140..A:BB140
                             A:BH122..A:BH122
SEP ACUTHOUSE
SEP ADVERTISE
SEP ASSET
SEP AUG
SEP BUILDING
SEP CAPSTOCK
                             A:BH33..A:BH33
                                                           Advertising expenses for September.
                                                          The performance measure Asset Turnover Ratio for September. Contains labels for Sep-Aug plots.
                              A: BH291..A: BH291
                             C: B509..C: M509
                                                          Balance in bank accounts for September.
Original cost of buildings owned at end of September.
Original cost of capital stock owned at end of September.
                             A:BH121..A:BB121
                              A:BH131..A:BH131
                             A: BB147..A: BB147
SEP_CASH
SEP_CONSUMABLE
SEP_CUSTOMS
                             A:BH120..A:BH120
A:BH125..A:BH125
A:BH18..A:BH18
                                                           Balance of cash on hand for September.
                                                          Original cost of consumable supplies on hand in September.
                                                          Customs expenses for September. Copy of the data entry form for September.
 SBP DATA
                             A: BB337 . . A: BE337
SBP DATBLINES
SBP DVDS
SEP EXHIBIT
                                                          The data inputted for September and located in SEP_DATA.
                              4:RR344..A:BH417
                             A: BI66 . . A: BI65
                                                           Dividends paid in September.
                             A:BH34 . . A:BH34
                                                           Bahibition expenses for September.
SEP PREIGHT
                             A:BH19..A:BB19
                                                          Preight expenses for September.
```

```
SEP FURNITURE
                           A:BH130..A:BH130 Original cost of office furniture owned at end of September.
                                                      The performance measure % Gross Margin on Sales for September.
SEP GROSS
SEP INTAX
                           A:BH293..A:BH293
                           A:BJ50..A:BJ50
                                                      Income tax expense for September.
SEP INTEREST
                           A:BI11..A:BI11
                                                      Interest earned in September.
SEP_INTEREST
SEP_INTERP
SEP_INVENTORY
SEP_ISSCAPSTE
SEP_LONGDEBT
SEP_MARGIN
                           A: BB42..A: BH42
                                                      Interest expense in September.
                                                      Bnd of the month inventory for September.
Proceeds from issuing capital stock in September.
                           A:BI24..A:BI24
                           A: BI248 . . A: BI248
                           A:B1145..A:B1145
A:BB287..A:BH287
                                                      Amount of long term debt at end of September.
                                                      The performance measure Margin % for September.
Date used in heading of income statement for September.
SBP_WONTH
SEP_NOTESPAY
SBP_OPPEGUIP
SBP_OTHER
                           A: BG3 . . A: BG3
                                                     Balance of notes payable for September.
Original cost of office equipment owned at end of September.
Other expenses not listed for September.
                           A: BH142..A: BH142
                           A:BH129..A:BH129
                           A:BH43..A:BH43
SEP-PREEXP
SEP-PURCHASES
                           A:BH123..A:BH123
A:BH17..A:BH17
                                                      Balance of prepaid expenses for September
Cost of purchases for inventory in September.
SBP RETURN
                           A:BH289..A:BH289
                                                      The performance measure Return on Capital for September.
SBP_SALARIBS
SEP_SALES
SEP_SELLEXP
SEP_SELLEXP
SEP_SEMINARS
SEP_SHORTBORROW
SEP_SHORTDBBT
                           A:BE39..A:BE39
                                                      Office salaries paid in September.
                                                      Revenue from sales for September.
                           A:BI7..A:BI7
                           A:BI31..A:BI31
                                                      Expenses associated with selling in September.
                           A:BH35..A:BH35
A:BI247..A:BI247
A:BI250..A:BI250
                                                      Expenses associated with seminars in September.
                                                      Proceeds from short term borrowing in September.
                                                      Payment made on short term debt in September.
SEP_SHURTUBBT
SEP_STAI
SEP_TAIPAY
SEP_TRAVEL
SEP_UTILITIES
                                                      Sales tax on inventory purchased in September.
Balance of taxes payable for September.
Travel expenses for September.
Utilities expenses for September.
                           A:BI8..A:BI8
                           A:BH141..A:BH141
                           A:BB41..A:BB41
                           A:BH40..A:BH40
UPDATE_DATA1
UPDATE_DATA2
VIBW_DATA1
                           C:B140..C:B140
                                                      Menu for updatting the data in the months Jan-Jun.
                                                      Menu for updatting the data in the months Jul-Dec.
Menu for viewing the data inputted into the months Jan-Jun.
                           C:B188..C:B188
                           C: B130 . . C: B130
VIEW DATA2
VIEW PLOT
VIEW REPORTS!
                           C: B135..C: B135
                                                      Menu for viewing the data inputted into the months Jul-Dec.
                           C: B279..C: B279
                                                      Menu for selecting which performance measure to plot.
                           C:B249..C:B249
C:B254..C:B254
                                                      Menu for viewing the financial reports for the months Jan-Jun.
Menu for viewing the financial reports for the months Jul-Dec.
VIEW REPORTS2
WARKING
                           C: A638 . . C: A638
                                                      Screen which warns the user after updatting a month's data that he. Lower left hand corner of the range WARNING.
WARNING CORNER
                           C: A657..C: A657
                                                      Auto loads the macro MAIN when the file is brought into Lotus. Equals the keystrokes ALT + N which execute the macro MAIN.
                           C:B3..C:B3
10
\N
                           C: B5..C: B5
                                                      Equals the keystrokes ALT + R which execute the macro RESTART.
١Ř
                           C: B531..C: B531
```

LIST OF REFERENCES

- Webster's Ninth New Collegiate Dictionary, Merriam-Webster Inc., 1985.
- Meigs, R.F. and Meigs, W.B., Financial Accounting, McGraw-Hill Inc., 1989.
- 3. Garrison, R.H., Managerial Accounting, Business Publications Inc., 1988.
- 4. Whitten, J.L., Bentley, L.D., and Barlow, V.M., Systems Analysis & Design Methods, Richard D. Irwin Inc., 1989.

BIBLIOGRAPHY

Donie, E.M., 1-2-3 Release 3 Business Applications, Que Corporation, 1989.

Dyrud, A., Posner, J., and Zuckerman, M., The Lotus Guide to 1-2-3 Advanced Macro Commands, Addison-Wesley Publishing Company Inc., 1987.

Jorgensen, C., Mastering 1-2-3 Release 3, SYBEX Inc., 1989.

Lunsford, E.M., Macros, Menus, and Miracles for Lotus 1-2-3, John Wiley & Sons Inc., 1990.

INITIAL DISTRIBUTION LIST

		No. Copies
1.	Defense Technical Information Center Cameron Station Alexandria, Virginia 22304-6145	2
2.	Library, Code 52 Naval Postgraduate School Monterey, California 93943-5002	2
3.	Commandant of the Marine Corps Code TE 06 Headquarters, U.S. Marine Corps Washington, D.C. 20380-0001	1
4.	Tarek K. Abdel-Hamid Code AS/Ha Naval Postgraduate School Monterey, California 93943-5100	4
5.	Shu S. Liao Code AS/Lc Naval Postgraduate School Monterey, California 93943-5100	1
6.	CAPT Bradford L. Martin 3107 Via Premio Carlsbad, California 92008	2